Haley & Aldrich, Inc.
1956 Webster Street
Suite 450
Oakland, CA 94612

Tel: 510.879.4544
Fax: 510.251.1304
HaleyAldrich.com

31 January 2014
File No. 39800-002

California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

Attention: Mr. Max Shahbazian, PG

Subject: Fourth Five-Year Review Report
1165/1175 East Arques Avenue
Sunnyvale, California

Dear Mr. Shahbazian:

Please find enclosed the Fourth Five-Year Review Report prepared by Haley & Aldrich, Inc. on behalf of Advanced Micro Devices, Inc. (AMD) for the former Monolithic Memories, Inc. (MMI) facilities located at 1165/1175 East Arques Avenue and 1160 Kern Avenue in Sunnyvale, California. This five-year report has been prepared to address a requirement of the Site Cleanup Order (91-139) issued by the California Regional Water Quality Control Board – San Francisco Bay Region.

Please contact either of the undersigned if you have any questions about the report.

Sincerely yours,
HALEY & ALDRICH, INC.

Michael Calhoun, PG, CHG
Senior Technical Specialist

Peter Bennett, PG, CHG
Lead Hydrogeologist and Vice President

Enclosures

c: Advanced Micro Devices, Inc.; Attn: Do Cao
Advanced Micro Devices, Inc.; Attn: Brett Stringer
United States Environmental Protection Agency; Attn: Melanie Morash

G:\39800_AMD_1165 E Arques-1160 Kern Ave\5-Year Review\Text\Cover letter.docx

FOURTH FIVE-YEAR REVIEW REPORT
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

by

Haley & Aldrich, Inc.
Oakland, California

for

Advanced Micro Devices, Inc.
Sunnyvale, California

File No. 39800-002
31 January 2014

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

FOURTH FIVE-YEAR REVIEW REPORT

1165/1175 E. Arques Avenue

Sunnyvale, California

1. INTRODUCTION

This report presents the fourth Five-Year Review for the former Monolithic Memories, Inc. (MMI) facilities at 1165/1175 E. Arques Avenue and 1160 Kern Avenue, located in Sunnyvale, California (collectively referred to as the Site; Figures 1 and 2). This Five-Year Review Report is submitted in response to Task 15 of Site Cleanup Requirements Order No. 91-139 (the Order), issued by the California Regional Water Quality Control Board, San Francisco Bay Region (Water Board). The three previous Five-Year Review Reports for the Site were submitted to the Water Board on behalf of Advanced Micro Devices, Inc. (AMD) in June 1996, June 2001, and February 2009. The Water Board, on behalf of the United States Environmental Protection Agency, Region 9 (EPA), submitted its previous 5-Year CERCLA Review for the Site on 30 September 2009 (EPA 5-Year Review; EPA, 2009) based on AMD's third Five-Year Review Report, submitted in 2009 (AMEC, 2009).

The period of review for this third Five-Year Review Report encompasses data collected at the Site from January 2009 through December 2013 (approximately 5 years). This period is referred to as the review period hereafter.

1.1 Regulatory Orders

Site Cleanup Requirements Order Number 91-139 was issued on 20 September 1991, by the Water Board. The Order documents the cleanup goals for Site soil and groundwater, and designates excavation and/or soil vapor extraction and treatment (SVE) and groundwater extraction and treatment as the final remedy for the Site. On 31 January 2002, National Semiconductor Corporation (NSC), through a private agreement with AMD, assumed responsibility for compliance with groundwater cleanup requirements for the Site under the Order. Under a National Pollutant Discharge Elimination System permit, treated groundwater was discharged by NSC to an off-Site storm sewer when the groundwater extraction and treatment system (GETS) was in operation between 2001 and 2005. In 2011, NSC was acquired by Texas Instruments, Inc. (TI).

An Administrative Civil Liability Order (ACL), No. R2-2006-0030, was issued on 10 May 2006 to TWC Storage LLC (TWC), by the Water Board, for the discharge of approximately 250 gallons of tetrachloroethene liquid (also known as perchloroethylene; PCE) on 15 July 2005 when TWC's contractors damaged a transformer during demolition activities. Hereafter, this discharge is referred to as the "PCE spill". The PCE spill occurred after AMD sold the 1165/1175 East Arques parcel to TWC. AMD is not named as a discharger on the ACL issued to TWC and is not responsible for cleanup or monitoring of the PCE spill.

1.2 Purpose of This Report

The purpose of the Five-Year Review is to determine whether the remedy at the Site is protective of human health and the environment (EPA, 2009). This fourth Five-Year Review Report summarizes the assessment of the effectiveness and efficiency of the ongoing remediation program over the past five years and addresses issues raised in the 2009 EPA 5-Year Review.

1.3 Issues Raised in the 2009 EPA 5-Year Review

The three issues and recommended follow-up actions presented in the 2009 EPA 5-Year Review (EPA, 2009) were as follows:

Issue #1*: Mass removal efficiency of the GWET system has declined over time and the system was shut down in 2005.*

Recommendation and Follow-up Action*: An evaluation of alternatives for achieving groundwater cleanup standards needs to be completed. The ROD and final SCR will need to be amended to reflect the change in remedy.*

Issue #2*: The impact of a 2005 spill of PCE has not been fully assessed.*

Recommendation and Follow-up Action*: An investigation should be completed to assess the impact of the 2005 PCE spill and the possible need for further action. Additionally, the ROD and final SCR will need to be amended to incorporate the implementation of remedial treatments and treatment systems related to the 2005 PCE spill.*

Issue #3*: The vapor intrusion pathway at the Site has not been assessed at 1160 Kern Avenue (Building 3), a property which is not covered by a restricted covenant. Additionally, further evaluation needs to be completed of the historic VOC concentrations in the bi-annual indoor air sampling program at 1155 East Arques Avenue (KinderCare).*

Recommendation and Follow-up Action*: Soil gas and possibly indoor air samples should be collected at 1160 Kern Avenue building to further assess the potential for a vapor intrusion pathway. The necessity of a further restrictive covenant for that property will be determined after the vapor intrusion assessment is completed. A statistical analysis of the historic indoor air data from KinderCare needs to be completed to verify that the clean-up activities from the 2005 PCE spill is protective of the KinderCare Facility.*

The follow-up actions described above are addressed as follows:

Issue #1. The data from groundwater sampling conducted in October 2013 indicate that concentrations of chemicals of concern (COCs) associated with MMI operations, such as PCE, 1,1-dichloroethane (1,1-DCA), 1,2-dichlorobenzene (1,2-DCB), and chlorobenzene generally are either not detected, or are detected near or below the groundwater cleanup goals. This data supports the results of a groundwater investigation performed on behalf of AMD in April 2005 which showed that COCs associated with past MMI operations were either below or very close to groundwater cleanup goals for the Site (AMEC, 2009) indicating the previous soil and groundwater remediation programs have been effective, and no substantial sources for these MMI indicator compounds remain. Two other

compounds, trichloroethene (TCE) and cis-1,2-dichloroethene (cDCE), which are detected in groundwater above their respective cleanup goals, are attributed to off-Site, upgradient sources.

No further groundwater extraction for remediation or containment of groundwater affected by MMI indicator chemicals is recommended since all AMD sources have been removed (AMEC, 2009), and prior to the PCE spill, concentrations of COCs in groundwater originating on-Site were below or approaching cleanup goals. TWC is addressing PCE impacts from the PCE spill, and the TCE and cDCE impacts originating from upgradient are addressed by hydraulic containment via the Texas Instruments (TI) extraction well network along Arques Avenue and Lakeside Drive (T&R, 2013a). After the completion of TWC's remediation activities, further active on-Site remediation would not be effective because groundwater has been affected by off-Site releases unrelated to any former AMD activities. Therefore, a transition from GETS to monitored natural attenuation (MNA) as the final Site groundwater remedy is recommended.

Issue #2. Cleanup and monitoring of the PCE spill has been conducted by TWC with Water Board approval under a separate Administrative Civil Liability Order, No. R2-2006-0030. TWC has ceased active remediation of the PCE spill and has requested that the Water Board issue a no further action letter (Arcadis, 2013b). In any event, an amendment to the ROD and SCR for the Site are not necessary as the Water Board is addressing the PCE spill through its ACL Order, and AMD is not a responsible party with respect to the PCE spill.

Issue #3. Several rounds of indoor air samples were collected at the 1160 Kern Avenue building between 2011 and 2013 to evaluate the potential for vapor intrusion. PCE and TCE were detected at concentrations above risk-based screening criteria for industrial air, but not at concentrations that would pose an unacceptable risk to human health (AMEC, 2011b; AMEC 2012). Elevated concentrations of TCE were primarily limited to the women's restroom in the warehouse. A preferential pathway evaluation was performed in May 2013 and the results suggested that vapor intrusion was occurring primarily through the floor drains and cracks in the floor of the women's warehouse restroom (Haley & Aldrich, 2013). A heating, ventilation, and air conditioning (HVAC) system evaluation was also performed in September 2013. Based on the results of this evaluation, vents were installed in the bathroom doors and a minimum outside air (OSA) intake was set on the HVAC units to improve the performance of the HVAC system. In coordination with RAFT (the current building owner), additional mitigation efforts are currently planned for the restrooms at the 1160 Kern Avenue building. When that mitigation is completed, AMD will conduct confirmation sampling and submit a report of findings to the Water Board and EPA.

Regarding restrictive covenants, TWC recorded a new deed restriction on the 1165 East Arques property in March 2013 prior to sale and development of the Site (Appendix A).

Following the 2005 PCE spill, 13 rounds of indoor air and concurrent soil vapor sampling were conducted by TWC at the adjacent off-Site 1155 East Arques Avenue property (KinderCare) through June 2012 (Arcadis, 2012b). During the last two sampling events (in which the heating, ventilation, and air conditioning [HVAC] system was off for the first event and on for the second), no PCE or breakdown products were detected above the laboratory reporting limit in indoor air samples. TWC has concluded that VOCs in the subsurface, including soil vapor, do not cause an unacceptable risk to indoor air quality (Arcadis, 2012b).

2. SITE BACKGROUND

The Order designates the Site as a portion of the area referred to as Operable Unit 1 (OU1) of the Eastern Sunnyvale Study Area (Figure 2). OU1 begins approximately 2,000 feet south of the Site and extends north beyond Highway 101. OU1 is subdivided into three subunit areas (Subunits 1, 2, and 3). The Site is designated as Subunit 2 of OU1 and consists of two adjacent properties regulated under the Order: 1165/1175 E. Arques Avenue and 1160 Kern Avenue (Figure 2). NSC (now TI) assumed responsibility for operation and monitoring of the groundwater extraction network operating beneath the entire Operable Unit 1, including Subunit 2, on 31 January 2002.

Groundwater monitoring for the Site is currently conducted through 15 monitoring wells sampled on an annual basis. In addition, three groundwater monitoring wells remain at the Site related to the PCE spill (Arcadis, 2013a). Four soil vapor monitoring probes are also located on the adjacent 1155 Aques property. Well locations are shown in Figure 2.

2.1 Site History and Chemical Use

Site history is summarized in Table 1. AMD owned the 1165/1175 E. Arques Avenue property after its acquisition of MMI in 1987 until 2005 but leased the 1160 Kern Avenue property, which was never owned by MMI or AMD, until 2006. The Site history is described below.

2.2 1165/1175 E. Arques Avenue

Two buildings, referred to as Building 1 (1165 E. Arques) and Building 2 (1175 E. Arques), were used for semiconductor manufacturing from 1970 through 1989 (Figure 2). MMI conducted semiconductor manufacturing operations on the Site from 1970 until 1987, when AMD merged with MMI and assumed responsibility for the Site. The Site was unoccupied from 1991 until 2005 when TWC purchased the property for redevelopment.

MMI initiated subsurface investigations at the 1165/1175 E. Arques facilities in 1982 in the vicinity of underground chemical storage tanks and chemical handling areas used for on-Site storage and/or treatment of waste solvents. During these initial investigations, COCs were detected in samples of soil and groundwater. MMI identified other possible sources of shallow groundwater contamination, including underground storage tanks, acid neutralization tanks, and waste handling areas, which were reported to store PCE, xylenes, chlorobenzene, dichlorobenzene, ethylbenzene, alcohols, ketones, and phenols (Canonie Environmental Services Corp. [Canonie], 1991).

In April 2005, AMD donated the 1165/1175 E. Arques Avenue property to a local charity, which immediately sold the property to TWC. TWC purchased the property intending to redevelop the Site for use as a self-storage facility. Both Building 1 and Building 2 and associated facilities, including the on-Site groundwater treatment system, were demolished to accommodate property redevelopment in the spring and summer of 2005. During demolition activities on 15 July 2005, a transformer located on a pad in the northwest corner of the Site was damaged by TWC's contractors, spilling approximately 250 gallons of PCE to the ground surface (Clayton, 2005). Property development activities were suspended between 2005 and 2013 while soil and groundwater cleanup operations have been implemented by TWC. The 1165/1175 Arques properties are currently being developed into a fitness center/gym facility.

Environmental deed restrictions were recorded for the 1165/1175 Arques Avenue property by AMD in 1992 as required by the Order and in 2005 prior to the transfer of ownership of the property. TWC recorded a new deed restriction in March 2013 prior to sale and development of the Site (Appendix A). The environmental deed restriction generally restricts the property to commercial/industrial uses; prohibits use as a hospital, health clinic, school, or day-care center; prohibits on-Site extraction or use of groundwater, except for necessary construction dewatering; and imposes restrictions on earthmoving and drilling activities.

The 1165 East Arques Avenue property is currently owned by Exstra Arques, LLC, which is constructing a fitness facility on the property.

2.3 1160 Kern Avenue

MMI began leasing the 1160 Kern property in 1974. The building on this property, also known as "Building 3", was used for office space, product handling and testing, and administration until 2003, when AMD closed the building. The lease on the property was terminated at the end of 2006. The 1160 Kern property currently is owned by Resource Area for Teaching (RAFT), a non-profit organization for teachers, which operates a warehouse on the property.

2.4 Nearby Off-Site Release Sites

Other release sites exist in the vicinity of the Site and to the south (hydraulically upgradient). Groundwater beneath the Site is affected by COCs originating from at least one of these other release sites. Groundwater beneath the TI (formerly NSC) facility (designated by the Order as Subunit 1 of OU-1), located upgradient of the Site at 2900 Semiconductor Drive, has been reported to contain VOCs including TCE, cDCE, 1,1-dichlorothene (1,1-DCE), 1,1,1-trichloroethane (1,1,1-TCA), and Freon 113 (T&R, 2006). These same VOCs are reported in groundwater samples beneath the former AMD Site and have been attributed to upgradient sources.

2.5 Hydrogeologic Conditions

The Site is located in the Santa Clara Valley which comprises the low-lying area extending about 25 miles southeast from San Francisco Bay and is bounded by the Diablo Range on the east and by the Santa Cruz Ranges on the west. The Santa Clara Valley is an alluvial basin bounded by the San Andreas and Hayward fault systems on the west and east, respectively, and filled with alluvial sediments to depths of greater than 1,500 feet (Iwamura, 1995). The Site lies within the confined portion of the Santa Clara Valley, where coarse-grained fluvial deposits deposited during times of low sea-level, and fine-grained sediments, deposited during times of high sea level; groundwater flow occurs primarily through the sand and gravel stream channel deposits (Schmidt and Burgmann, 2003; Iwamura, 1995).

The Site hydrostratigraphy has been classified into three water bearing units for convenience: the A, B, and C Zones (Arcadis, 2001). These water bearing units are separated by the approximately 30-foot-thick A-B aquitard (20 to 50 feet below ground surface [bgs]), and the approximately 30-foot-thick B-C aquitard (50 to 80 feet bgs). The B-zone is subdivided into an upper B1-zone overlying the B2-zone. Depth to water at the Site is approximately 10 feet bgs. Groundwater in the A- and B-zones generally flows to the north/northeast.

Due to the heterogeneous nature of the alluvial sediments beneath the Site, large variations in permeability (hydraulic conductivity) have been measured during hydrogeologic characterization programs. The coarse-grained sediments of the A-zone are generally 2.5 to 22 feet in vertical thickness, with reported hydraulic conductivity values ranging from 1 to 60 feet per day (ft/d; Pacific Environmental Group, Inc. [PEG], 1996a). B-zone saturated thickness ranges from 4 – 25 feet, with reported hydraulic conductivity values ranging from 1 – 80 ft/d (PEG, 1996a). The hydraulic conductivity of the A-B aquitard has been characterized as ranging from 0.003 to 0.03 ft/d (PEG, 1996a).

2.6 Distribution of COCs in Soil and Groundwater

MMI evaluated the integrity of its underground storage tank systems in 1982 at the request of the Water Board (PEG, 1996b). The assessment conducted by MMI included collecting soil samples and installing twelve monitoring wells (PEG, 1996a). COCs were reported as detected in soil and groundwater samples collected during this time. Between 1984 and 1991, additional investigations were conducted which included drilling 55 soil borings, installation and monitoring of an additional 37 monitoring and extraction wells, and hydraulic testing (PEG, 1996b).

Additional soil characterization was completed on behalf of AMD in 2005 and 2006, to delineate areas of soil for removal after the demolition of Building 1 and Building 2. In March 2005, additional groundwater characterization was conducted on behalf of AMD to locate two new extraction wells. As previously discussed, TWC has performed several rounds of soil and groundwater characterization in conjunction with their remedial activities related to the PCE spill.

2.6.1 COCs in Soil

Soil characterization was conducted during the early excavations completed in 1984 and during a soil sampling program conducted in 1989 (PEG, 1996a). Samples were reported as containing VOCs (PCE, TCE, 1,2-DCB, 1,2-DCE, ethylbenzene, toluene, and xylenes) and polycyclic aromatic hydrocarbons (PAHs). PCE was detected at a maximum concentration of 4.6 milligrams per kilogram (mg/kg) from a soil sample collected near the former waste solvent tank and collection system and the former vaulted acid neutralization tank and wastewater collection system at Building 2.

Soil sampling was conducted again after the soil vapor extraction program was implemented. The results indicated that all concentrations of PCE in soil samples collected from Area 1 were below the 1 mg/kg cleanup goal (PEG, 1996b). Area 1 was located near the former Building 2 waste solvent tank, waste reclaim tank, acid neutralization tank, and J-1000 tank. PAHs were reported in soil samples from Area 2 near the former Building 1 acid neutralization tank.

As discussed previously, the PCE spill of 2005 resulted in PCE impacts to soil and groundwater at concentrations orders of magnitude greater than had previously been associated with former MMI releases. Soil samples collected on 28 July 2005 near the former transformer location were reported to contain PCE at concentrations as high as 12,000 mg/kg (i.e. the soil sample contained 1.2 % PCE by weight) (Bureau Veritas, 2006b). Approximately 2,300 cubic yards (cy) of PCE-affected soil was removed by contractors on behalf of TWC (Bureau Veritas, 2006b). Post-excavation confirmation samples from the TWC investigation indicated that most of the soil with PCE concentrations above 0.24 mg/kg had been removed, although higher

concentrations (0.67 and 1 mg/kg) were reported in two samples that were not excavated (Bureau Veritas, 2006b). Additional soil and groundwater remediation efforts (dual-phase extraction and enhanced reductive dechlorination [ERD]) have been implemented by TWC. TWC was allowed to curtail soil remediation by the Water Board on 7 November 2008, after an additional 37 pounds of PCE had been removed from vadose zone soils by vapor extraction.

Redevelopment of the Site and demolition of Buildings 1 and 2 by TWC allowed access to areas that were previously reported to contain residual PCE (Area 1) or PNAs (Area 2) in soil. Excavation was proposed in 2004 by AMD on a voluntary basis even though no further soil remediation was required by the Water Board (Arcadis, 2001). Two additional areas were proposed for excavation in 2005. Area 3 was discovered during the 2005 subsurface characterization program along the northern property boundary (AMEC, 2009). Soil samples collected from this area were reported to contain VOCs and semivolatile organic compounds (SVOCs). A fourth area of soil affected by VOCs was identified during TWC's demolition of former Site structures (Area 4). Sampling and remediation programs for delineation of chemicals in soil were conducted in each Area (Geomatrix, 2005b and 2005c), and impacted soils were excavated (Geomatrix, 2006b).

PCE was reported as detected at concentrations above screening criteria in three soil samples collected at two locations near the southern property boundary of 1160 Kern Avenue. Two of these samples contained higher concentrations of PCE than the other soil samples and appear to be related to the PCE spill. It was unclear whether the third PCE detection could be attributed to the PCE spill, historical operations at 1165 Arques, or a combination of these two sources (Geomatrix, 2006c). Excavation, confirmation sampling, and backfilling of these areas were completed in November 2006, as documented in the excavation completion report (Geomatrix, 2006d).

Characterization and remediation of COCs in soil at the Site is complete.

2.6.2 COCs in Groundwater

Site groundwater samples were reported to contain COCs during initial subsurface investigations conducted in 1982 on behalf of MMI, including the MMI "indicator chemicals" PCE, 1,1-DCA, 1,2-DCB, and chlorobenzene. These indicator chemicals are associated with historical operations at MMI, and have been detected primarily in samples collected from shallow groundwater (A-zone) beneath the Site. Other COCs detected in Site groundwater, primarily TCE, cDCE, and Freon 113, have been identified as associated with regional groundwater contamination (PEG, 1996a), and are also found beneath the TI (formerly NSC) Site (T&R, 2006). These regional chemicals have been detected in groundwater samples from both the A Zone and the deeper B-Zone aquifer.
Concentrations of COCs have decreased in both the A-zone and B-zone groundwater samples collected during monitoring events between 1982 and 2013. A summary of the results for MMI indicator compounds in samples collected during the most recent groundwater monitoring event conducted in October 2013 is shown below:

Compound	PCE	1,1-DCA	1,2-DCB	Chlorobenzene
Cleanup Goal (μg/L)	5	5	600	70
Max Concentration (μg/L)	34	4	17	98
Median Concentration (μg/L)	<0.5	2	<0.5	<0.5
No. Wells Above Cleanup Goals	5	0	0	1

Of these, only PCE and chlorobenzene were present at concentrations above their cleanup goals and the concentration of 34 μg/L was measured at MM17A, which is known to have been impacted by the PCE spill, as discussed below. Nonetheless, the maximum concentrations of MMI-related COCs were less than one order of magnitude above the cleanup goal (Table 2). During the October 2013 monitoring event, the results for regional indicator compounds are summarized as follows:

Compound	TCE	cDCE	1,1-DCE	1,1,1-TCA	Freon 113
Cleanup Goal (μg/L)	5	6	6	200	1,200
Max Concentration (μg/L)	220	370	8.6	0.6	4.7
Median Concentration (μg/L)	38	75	<1.0	<0.5	<2.0
No. Wells Above Cleanup Goals	11	12	1	0	0

Of these, TCE, cDCE and 1,1-DCE were present at concentrations up to one order of magnitude or more above their cleanup goals (Table 2).

As previously discussed, shallow (A Zone) groundwater beneath a portion of the Site has been impacted by the 2005 PCE spill. In February 2006, well MM17A was reported to contain PCE at a concentration of 96,000 μg/L due to the nearby PCE spill (Bureau Veritas, 2006a).TWC has conducted cleanup and monitoring activities related to the spill; the maximum concentration of PCE reported in the most recent sampling event conducted in October 2013 was detected at MM17A, at a concentration of 34 μg/L.

3. PROGRESS SINCE 2008 REVIEW

The progress made by AMD over the review period (2009 through 2013) includes annual groundwater monitoring (conducted by TI under an agreement with AMD) and investigation and mitigation related to potential vapor intrusion at 1160 Kern (Building 3). Investigation and remediation work also was completed at the Site by others, including groundwater remediation and monitoring (related to the PCE spill), well decommissioning, and indoor air and soil vapor sampling at the off-Site adjacent 1155 East Arques Avenue property (KinderCare). This progress is summarized in Table 1 and discussed in the following sections.

3.1 Groundwater Monitoring Program

Annual groundwater monitoring was conducted at the Site during the review period. The program was conducted by Treadwell & Rollo (T&R) on behalf of TI (formerly NSC). The wells included in the most recent groundwater sampling event are: MM01A, MM07A, MM17A, MW18AR, MM31A, MM33A, MM34A, MM37A, MM40A, MM14B1, MM17B1, MM33B2, ME43A, ME07B1, and ME19B2. Historical groundwater monitoring results for PCE, TCE, and cDCE in Site monitoring wells are included as Appendix B.

The highest concentration of PCE detected in groundwater samples collected during the 2013 sampling event was 34 μg/L in the A-Zone well MM17A. As previously stated, this well has historically been shown to be impacted by PCE from 2005 PCE spill. Generally, the concentrations of PCE in other A-Zone monitoring wells are near or below the cleanup goal of 5 μg/L. PCE was not detected in the most recent groundwater samples from B-Zone monitoring wells.

The maximum concentration of TCE and cDCE (constituents indicative of the regional plume) detected in samples collected during the 2013 monitoring event were 220 and 370 μg/L from wells MM37A and MM07A, respectively. Well MM37A is an off-Site well located on the adjacent property at 1155 East Arques Avenue, and well MM07A is located on the eastern edge of the Site near the property boundary of 1160 Kern and 1165/1175 E. Arques. In general, concentrations of TCE and cDCE detected in Site monitoring wells are comparable to concentrations in wells located south (upgradient) of the Site (e.g., wells 98A/B1, 100B1, and 101A).

3.2 Vapor Intrusion Evaluation for 1160 Kern Avenue

In response to the recommendations and follow-up actions outlined by the Water Board and EPA in their Third Five-Year Review of the Site (EPA, 2009), a vapor intrusion evaluation was performed at the 1160 Kern Avenue building that included multiple rounds of indoor air sampling. The results of the vapor intrusion evaluation and mitigation actions are described below.

3.2.1 2011 Indoor Air Sampling

In August 2011, indoor air sampling was performed at the 1160 Kern Avenue building in general accordance with the Final Work Plan for Indoor Air Investigation (IA Work Plan; AMEC, 2011a). Prior to collecting indoor air samples, a building survey was conducted, including a site walk with representatives from EPA and Water Board to identify appropriate indoor and ambient air sampling locations. The Site walk included field screening to evaluate

potential preferential vapor intrusion pathways using a ppbRAE, a low-level photoionization detector (PID) with a reporting limit of 1 part per billion. On 10 August 2011, a second Site visit was performed to identify specific sample locations, complete building survey forms and inventory products that could potentially contain VOCs.

Indoor and outdoor air samples were collected on 21 August 2011. The HVAC units were de-activated for approximately 36 hours prior to sampling, in order to provide a worst-case scenario for potential vapor intrusion. Indoor air samples were collected with the air intakes at approximately 3 to 5 feet above floor level to be representative of the breathing zone. In addition, preferential pathway samples were collected on the floor adjacent to the potential pathway intended for evaluation. Outdoor (ambient) air samples were collected in the grass adjacent to the parking lot north (i.e., upwind) of the building and on the roof.

PCE and TCE were detected in indoor air at concentrations exceeding screening criteria for industrial air. In addition, higher concentrations of PCE and TCE were detected in the women's restroom in the warehouse, indicating the presence of a potential preferential pathway. However, the results of indoor air samples were evaluated in a human health risk assessment (HHRA); the results of the HHRA indicated that concentrations of PCE and TCE detected in indoor air do not present a public health risk (AMEC, 2011b).

3.2.2 2011 and 2012 Confirmation Sampling

On 13 December 2011, TrapGuard® drain inserts were installed in each of the drains in the warehouse restrooms with the intention of decreasing the potential for vapors to enter the rooms if present in the drains. Indoor air samples were collected at four potential preferential pathway locations, including the central floor drain in the women's warehouse bathroom, with the HVAC system de-activated to confirm the effectiveness of the mitigation measures on 22 December 2011 (AMEC, 2012). Although concentrations of PCE and TCE were reduced in the samples collected in the women's warehouse bathroom in December 2011 compared to August 2011, the PCE and TCE were detected at concentrations exceeding screening criteria for industrial air in the two samples collected on the floor of the women's warehouse restroom adjacent to the central floor drain (AMEC, 2012). A second round of confirmation sampling occurred in July 2012, with concentrations of PCE and TCE detected at concentrations slightly higher than the December 2011 sampling event (Haley & Aldrich, 2013). Based on these results, AMD proposed additional mitigation measures to further reduce TCE concentrations in the women's warehouse restroom.

3.2.3 2013 Preferential Pathway Investigation

On 24 May 2013, a preferential pathway investigation was completed at the 1160 Kern Avenue building by Haley & Aldrich and AMEC in general accordance with the Revised Work Plan for Preferential Pathway Investigation submitted by AMEC Environment & Infrastructure, Inc. to the Water Board on 25 January 2013 (AMEC, 2013). A total of 34 breathing zone and preferential pathway samples were collected and analyzed in real-time using a portable gas chromatograph/mass spectrometer (GC/MS). Samples were collected at a rate of approximately 100 milliliters per minute, and analyzed using the quantitative mode based on the method developed for indoor air characterization at Hill Air Force Base in Utah (Gorder and Dettenmaier, 2011). The results of the preferential pathway study suggest the potential for

vapor intrusion though the floor drains and cracks in the floor of the women's warehouse restroom, based on the relatively higher concentrations of TCE in preferential pathway samples collected at those locations compared to the breathing zone samples (Haley & Aldrich, 2013).

3.2.4 HVAC System Evaluation and Improvements

An evaluation of the HVAC system was performed at the building located at 1160 Kern Avenue in Sunnyvale, California by Air Systems, Inc. (ASI), under the direction of Haley & Aldrich on 26 and 27 September 2013. Based on the results of this evaluation, the following two improvements to the HVAC system were implemented:

Increase outside air (OSA) intake rates. Two separate rooftop HVAC systems service the front offices and volunteer room, and each unit operates with a variable OSA intake that is controlled by an adjustable economizer. The economizer automatically adjusts the damper opening based on the thermostat settings and the outside air temperature. For example, the damper would reduce OSA intake when temperatures are higher outside than inside, and the HVAC system is cooling air. The OSA intake was completely closed for the office area and 5 percent open for the volunteer room during the 26 September 2013 inspection. The more OSA that is brought in, the higher the air exchange, and greater attenuation of VOC concentrations from vapor intrusion. To be consistent with California State Energy Code and Occupational Safety and Health Administration (OSHA) regulations for minimum supply of OSA for commercial buildings, a minimum OSA intake on each damper was set so that the OSA for each area of the building is at least 0.15 cubic feet per minute per square foot (CCR Title 24, Part 6, Subchapter 3, Section 121).

Installation of vents in the bathroom doors. During the HVAC inspection, negative pressure was observed (using a handheld, digital manometer) in every bathroom except for the men's bathroom in the warehouse (due to an opening in the ceiling of this bathroom). Negative pressure is likely caused by the exhaust units in each bathroom. Vents were installed in each bathroom door on 21 October 2013 to allow for sufficient ventilation so negative pressure will not be generated by the exhaust fans.

3.3 Investigation and Remediation Activities Completed by Others

A number of investigation and remediation activities, focused primarily on the northwest corner of the Site and associated with the 2005 PCE spill, were conducted by TWC during the study period. Other activities were completed related to Site redevelopment. These activities are described in the Sections below.

3.3.1 Enhanced Reductive Dechlorination

The Remedial Action Work Plan (RAWP) submitted on behalf of TWC recommended enhanced reductive dechlorination (ERD) to remediate residual PCE-impacted groundwater (LFR, 2008). In June 2009 and December 2010, TWC injected approximately 930 and 1,910 pounds of 3DMe™ substrate, respectively, to stimulate ERD processes (Arcadis, 2012a). The effectiveness of the injections on reducing concentrations in groundwater was evaluated using groundwater monitoring data as described below.

3.3.2 Groundwater Monitoring Activities

TWC has conducted groundwater monitoring related to the 2005 PCE spill since 2007 to document the effectiveness of remedial activities. In January 2012, TWC submitted a No Further Action (NFA) Work Plan (Arcadis, 2012a) which concluded that groundwater RAOs have been met. The NFA Work Plan also proposed two additional rounds of groundwater monitoring, in August 2012 and February 2013 to confirm that RAOs have been achieved and that no rebound of COCs has occurred. At the completion of these sampling events, TWC proposed and was granted approval for the decommissioning of the majority of their groundwater monitoring and extraction wells (Arcadis, 2013a). Seventeen groundwater extraction, groundwater monitoring, and soil vapor extraction wells were decommissioned at the Site (Arcadis, 2013a), and a third confirmation monitoring event was conducted for the remaining wells (EX-1, EX-2, and MW-3) in October 2013.

Groundwater monitoring results indicate that concentrations of PCE in the area of the spill have decreased substantially since 2007, to near or below cleanup standards. However, several breakdown products of PCE (such as TCE, cDCE, and vinyl chloride) potentially related to the 2005 PCE spill or upgradient, off-Site sources remain elevated in the wells. The maximum concentration of TCE, cDCE, and vinyl chloride detected during the October 2013 monitoring event were 170, 140, and 130 μg/L, respectively (Arcadis, 2013b).

3.3.3 Indoor Air and Soil Vapor Sampling at 1155 East Arques Avenue

TWC has conducted indoor air and soil vapor sampling at the adjacent off-Site 1155 East Arques Avenue property, which is home to KinderCare, a daycare facility. During the review period, four rounds of indoor air and concurrent soil vapor sampling were conducted (December 2009, June 2010, December 2010, and June 2012). During the most recent sampling event, indoor samples were collected with the HVAC system off (to represent a hypothetical worst-case scenario) on June 16, 2012, and with the HVAC system on (to represent a typical exposure scenario) on June 23, 2012. Soil vapor samples were collected on June 16, 2012.

Historically, PCE and TCE have been detected at low-to-non detect concentrations (maximum concentrations of 2.3 and 2.4 $\mu g/m^3$, respectively) in indoor air at the KinderCare facility. These compounds have also been detected in outdoor (ambient) air samples at concentrations of up to 1.3 and 0.33 μg/m3, respectively. The detected concentrations have decreased over time, and during the most recent sampling events (both with the HVAC on and off), neither PCE nor TCE was detected above the laboratory reporting limit (Arcadis, 2012b).

PCE and TCE were detected in soil vapor samples collected in June 2012 at concentrations of 2,800 and 4,100 $\mu g/m^3$, respectively. These concentrations are consistent with recent historical results, and represent a large decrease from concentrations observed before the completion of active remediation between 2005 and 2011 (Arcadis, 2012b).

TWC concluded that VOCs in the subsurface, including soil vapor, do not cause an unacceptable risk to indoor air quality (Arcadis, 2012b). For that reason, indoor air and soil vapor sampling ceased following the latest sampling event.

3.3.4 Soil Vapor Sampling at 1165/1175 East Arques Avenue

In preparation for Site redevelopment, Environmental Risk Specialties (ERS) Corporation conducted soil vapor sampling at 1165/1175 East Arques Avenue on behalf of Dollinger Properties. The purpose of the sampling was to aid in the design of a vapor barrier to be installed during the construction of a fitness facility. Vapor samples were collected from approximately 5 and 8 feet bgs at each of 12 locations at the Site in December 2012 (ERS, 2013). PCE and TCE were detected in every sample collected, at concentrations ranging from 160 to 4,900 $\mu g/m^3$ (for PCE) and 29 to 4,500 $\mu g/m^3$ (for TCE). At each location, the concentration of PCE and TCE was higher in the sample collected at the deeper (8 feet bgs) depth interval than the shallower (5 feet bgs) interval.

3.3.5 Environmental Deed Restriction

In March 2013, TWC recorded a new Covenant and Environmental Restriction on Property (see Appendix A). Among other prohibitions, the deed restriction limits Site use as follows:

- The Site is restricted to commercial or industrial uses.
- Residential development is not permitted.
- Hospitals, health clinics, day-care centers, and schools for children under 21 years of age are not permitted.
- Extraction, utilization, consumption, and/or disposal of Site groundwater (except for necessary construction dewatering) is prohibited.
- All soils brought to the surface by grading, excavating, trenching, or backfilling shall be managed in accordance with the Site Management Plan (as well as applicable State and Federal law).

3.3.6 Site Management Plan

In July 2013, T&R submitted a Site Management Plan (SMP) for the redevelopment of the property at 1165/1175 East Arques Avenue on behalf of Exstra-Arques, LLC (the current property owner). The SMP included the following elements (T&R, 2013b):

- A health and safety plan (HASP) to be followed during Site redevelopment,
- A soil management plan to describe the management of soils during grading, excavation, trenching, and construction activities, including pre-construction soil sampling, reuse, and disposal of soil,
- Procedures for dust control during earth movement and construction,
- A plan for the installation of a sub-slab vapor mitigation system during new building construction, including a vapor membrane barrier and a passive vapor collection and venting system, and

- An operation and maintenance (O&M) plan and verification monitoring plan for the vapor mitigation system.

3.4 Groundwater Extraction and Treatment System

Previously, 12 extraction wells were operated as part of the Site GETS. Upon transfer of GETS operations to NSC in 2002, the Site GETS operational strategy was modified by NSC to incorporate it into the overall groundwater extraction program for OU1 as described in the 15-year review report for OU1 (T&R, 2006). In February 2005, extraction wells ME19B2, ME20B2, ME25A, ME27A, ME28A, ME39A, ME42A, and ME43A were shut down by NSC with Water Board approval. The wells were shut down because of low concentrations or low production rates (T&R, 2004). Due to changes in Site use, seven extraction wells (ME20B2, ME25A, ME26A, ME27A, ME28A, ME38A, and ME42A) located at the Site, along with the on-Site treatment system, were decommissioned with Water Board approval in 2005 and 2006 (Geomatrix, 2005a and 2006a). Two replacement extraction wells, E44A and E45A, were installed at the Site in May 2005 but have not been used because of the subsequent PCE spill in July 2005.

Based on the low concentrations of MMI-related chemicals in groundwater samples collected during the most recent groundwater monitoring event conducted by TI in October 2013, and during the April 2005 characterization program (AMEC, 2009), no further groundwater extraction for remediation or containment of groundwater affected by MMI indicator chemicals is recommended. MMI indicator chemicals are generally near or below cleanup goals because on-Site sources related to former MMI operations have been remediated. Residual PCE in soil from the 15 July 2005 PCE spill has also been addressed by remedial activities conducted by TWC. TWC has since requested No Further Action for PCE-affected A-zone groundwater beneath the western portion of the Site, and decommissioned the majority of its wells. To the extent additional remedial action related to the PCE spill is required, the Water Board can address that issue through its Administrative Civil Liability Order process. Therefore, AMD recommends permanent curtailment of groundwater remediation activities related to former MMI operations. No further groundwater remediation activities are planned by AMD.

4. REMEDIAL SYSTEM PERFORMANCE AND EFFECTIVENESS

4.1 Remedial Objectives

The groundwater remediation goals for the Site, as defined in the Order, are based on the lowest adopted or proposed Federal Maximum Contaminant Levels (MCLs), State of California MCLs, or State of California action levels. The current, applicable MCLs for the Site for compounds listed in the Order are presented in Table 2 and compared to historical cleanup goals included in the Order and previous Five-Year reports. Remediation goals established in the Order have not changed since the last Five-Year report (AMEC, 2009). Soil cleanup goals for the Site defined in the Order are 1 mg/kg for total VOCs and 10 mg/kg for PAHs (Table 2).

4.2 Soil Remediation

No further soil remediation is required under the Order per correspondence received from the Water Board in 1997. Due to changes in Site use for both the 1165/1175 E. Arques Avenue and 1160 Kern Avenue properties, soil investigations, excavations for removal of impacted soil, and confirmation sampling were conducted by AMD in 2005 and 2006. Soil investigations and confirmation sampling indicate that remediation activities have met risk-based cleanup objectives. Institutional controls (i.e., deed restriction) and the SMP (T&R, 2013b) in place for the Site will be used to manage any future risk associated with any potentially impacted soil left in place. Therefore, no further active soil remediation is planned for the Site.

4.3 Groundwater Remediation

The GETS was not operated during the review period of 2009 through 2013. As discussed previously, no further groundwater extraction and treatment related to MMI indicator chemicals is recommended. Groundwater concentrations related to historical MMI sources are below or very close to cleanup goals. However, groundwater concentrations of PCE (from the 2005 PCE spill) and TCE and cDCE (regional chemicals from an upgradient release) remain above cleanup goals.

4.4 Extraction Mass Removal and Efficiency

From 1986 when the GETS began operating until it ceased operating in 2005, approximately 594 million gallons of groundwater were extracted, treated, and discharged under an NPDES permit. During this time approximately 981 pounds of COCs were removed (AMEC, 2009), for a cumulative mass removal efficiency of approximately 1.65 lb/MGal. While in operation, the mass removal efficiency of the GETS had been decreasing over time, based on previous 5-Year reports (e.g., Arcadis, 2001; AMEC, 2009).

4.4.1 Concentration Trends

Historical chemical concentrations for PCE, TCE, and cDCE detected in samples collected from Site monitoring wells are included as Appendix C. Concentration trends for PCE, TCE, and cDCE for existing wells are included as Figures 3 and 4, and for all wells (both existing and previously decommissioned) in Appendix C. The major conclusions from trend analyses over the study period are:

- PCE concentrations have generally remained stable or decreased over the review period, and are below the cleanup goal in the majority of Site monitoring wells.

- During the review period, concentrations of regional plume indicator compounds TCE and cDCE either remained stable or declined in Site monitoring wells. Of particular note, in wells MM14B1 (downgradient of the Site), ME19B2 (middle of the Site), and MM33B2 (off-Site near the intersection of Arques Avenue and Lawrence Expressway) concentrations decreased by approximately an order of magnitude over the review period.

4.5 Cost Evaluation

From 1991 through 2008, the total cost of addressing soil and groundwater contamination beneath the Site was reported to be $3,116,000 (AMEC, 2009). AMD has spent approximately $254,000 on remediation contractor and general consulting fees during the current review period (based on information provided by AMD).

The total cost for remediation to date is: $ 3,370,000

Haley & Aldrich estimates that future remediation costs will be approximately $620,000, for a total project cost of approximately $4,000,000.

5. CONCLUSIONS AND RECOMMENDATIONS

Based on the evaluation of historical data from the Site, as reported in this Fourth Five-Year Review Report, the following conclusions and recommendations are made:

- The soil and groundwater remediation programs had been effective, and no substantial sources for MMI indicator compounds appear to be significantly affecting groundwater quality. MMI-related chemicals are below or close to cleanup goals in groundwater beneath the Site. This is evident by the low to non-detectable concentrations of PCE, 1,1-DCA, 1,2-DCB, and chlorobenzene in Site monitoring wells. Where detected, concentrations have generally declined or remained stable over the review period, and are generally near or below the cleanup goals.

- COCs indicative of regional groundwater impacts, such as TCE and cDCE, have generally decreased or remained stable, but are detected at concentrations above the cleanup goals.

- Significant progress has been made to address the impact of the 2005 PCE spill, and concentrations in groundwater in the area of the spill have decreased by orders of magnitude. TWC has requested No Further Action relating to the groundwater impacts, and has decommissioned most of the wells associated with remediation and monitoring of the spill. However, the concentration of PCE breakdown products remain elevated in some locations, and additional monitoring may be necessary to show that RAOs are achieved and that rebound does not occur.

- No further groundwater extraction for remediation or containment of groundwater affected by MMI indicator chemicals is recommended because groundwater concentrations of chemicals associated with former MMI operations are low.

- After the completion of TWC's remediation activities, further on-Site active remediation would not be effective because groundwater has been affected by off-Site releases unrelated to any former AMD activities. Alternate remedies to address TCE and cDCE beneath the Site would not be appropriate given that these compounds appear to originate off-Site, and therefore the effects of on-Site cleanup would be relatively short-lived.

- Indoor air investigations conducted at 1160 Kern Avenue (Building 3) have evaluated vapor intrusion, and have concluded that no unacceptable risk to human health exists; however, vapor intrusion appears to be occurring via preferential pathways in the women's warehouse restroom. Mitigation efforts are under way to mitigate vapor intrusion by sealing preferential pathways and enhancing ventilation. When that mitigation is completed, AMD will conduct confirmation sampling and submit a report of findings to the Water Board and EPA.

- The present Site conditions do not pose an unacceptable risk to human health because of past remedial actions and institutional controls that are in place.

It is recommended that the final remedy for Site groundwater be formally transitioned from groundwater extraction and treatment to monitored natural attenuation. It is also recommended that the Site be considered for deletion from the National Priorities List.

REFERENCES

1. AMEC, 2008, Soil Excavation Report, 1165/1175 E. Arques Avenue, Sunnyvale, California, November 17.

2. AMEC, 2009, Five-Year Review Report, 1165/1175 East Arques Avenue Site, February.

3. AMEC, 2011a, Final Work Plan for Indoor Air Investigation, 1160 Kern Avenue, Sunnyvale, California, July 29.

4. AMEC, 2011b, Report of Results—Indoor Air Sampling, 1160 Kern Avenue, Sunnyvale, California, October.

5. AMEC, 2012, Addendum to Report of Results—Indoor Air Sampling, 1160 Kern Avenue, Sunnyvale, California, January.

6. Arcadis, 2001, Five-Year Report, Advanced Micro Devices, Inc., 1165/1175 E. Arques Avenue, Sunnyvale, California, September 18.

7. Arcadis, 2012a, No Further Action Work Plan, 1165/1175 East Arques Avenue, Sunnyvale, California, January.

8. Arcadis, 2012b, Report on Indoor Air and Soil Gas Sampling, 1155 East Arques Avenue, Sunnyvale, California, September.

9. Arcadis, 2013a, Well Destruction Report and Ongoing Monitoring Work Plan, 1165/1175 East Arques Avenue, Sunnyvale, California, August.

10. Arcadis, 2013b, Groundwater Monitoring Report – October 2013, 1165/1175 East Arques Avenue, Sunnyvale, California, December.

11. Bureau Veritas, 2006a, Interim Remedial Action Progress Report, 1165/1175 E. Arques Avenue, Sunnyvale, California, August 17.

12. Bureau Veritas, 2006b, Soil and Groundwater Investigation Report, 1165/1175 E. Arques Avenue, Sunnyvale, California, January 17.

13. Bureau Veritas, 2006c, Semi-Annual Soil Gas and Indoor Air Sampling Report, 1155 E. Arques Avenue, Sunnyvale, California, November 30.

14. Bureau Veritas, 2007, Additional Site Characterization Report (Rev 1.0), 1165/1175 East Arques Avenue, Sunnyvale, California, February 15.

15. California Regional Water Quality Control Board, San Francisco Bay Region, 1991, Order No. 91-139, Site Cleanup Requirements for Advanced Micro Devices, National Semiconductor Corporation, Hewlett-Packard, and Shahinian Trust, Subunit 2, Operable Unit 1, Sunnyvale and Santa Clara, Santa Clara County, September 20.

16. California Regional Water Quality Control Board, San Francisco Bay Region, 2008, Approval of Curtailment Report and Verification Sampling Report, TWC Storage, 1165/1175 East Arques Avenue, Sunnyvale, Santa Clara County, November.

17. Canonie Environmental Services Corp., 1991, Final Feasibility Study, Arques Avenue Facility, Sunnyvale, California, May 7.

18. Clayton, 2005, Work Plan for Soil and Groundwater Investigation, 1165/1175 East Arques Avenue, Sunnyvale, California, November 2.

19. Environmental Risk Specialties Corp., 2013, Soil Gas Investigation Report, 1165 East Arques Avenue, Sunnyvale, California, January.

20. Geomatrix Consultants, Inc., 2005a, Well Destruction Report, 1165/1175 E. Arques Avenue, Sunnyvale, California, June 17.

21. Geomatrix Consultants, Inc., 2005b, Addendum to the Work Plan for Excavation of Soil, 1165/1175 E. Arques Avenue, Sunnyvale, California, June 17.

22. Geomatrix Consultants, Inc., 2005c, Addendum No. 2 to the Work Plan for Excavation of Soil, 1165/1175 E. Arques Avenue, Sunnyvale, California, October 28.

23. Geomatrix Consultants, Inc., 2006a, Well Destruction and Installation Report, 1160 Kern Avenue, Sunnyvale, California, April 25.

24. Geomatrix Consultants, Inc., 2006b, Addendum No. 3 to the Work Plan for Excavation of Soil, 1165/1175 E. Arques Avenue, Sunnyvale, California, November 10.

25. Geomatrix Consultants, Inc., 2006c, Results of Shallow Soil Investigation and Report of Wastewater Conveyance Piping Removal and Work Plan for Excavation of Contaminated Soil, 1160 Kern Avenue, Sunnyvale, California, September 13.

26. Geomatrix, 2006d, Soil Excavation Report, 1160 Kern Avenue, Sunnyvale, California, December 15.

27. Gorder, K. and Dettenmaier, E., 2011, Portable GC/MS Methods to Evaluate Sources of cVOC Contamination in Indoor Air, Groundwater Monitoring and Remediation, Vol. 31, No. 4, Fall 2011, pp.113-119.

28. Haley & Aldrich, Inc., 2013, Preferential Pathway Investigation Report and Proposed Mitigation Measures, 1160 Kern Avenue, Sunnyvale, California, July 8.

29. Iwamura, T.I., 1995, Hydrogeology of the Santa Clara and Coyote Valleys Ground Water Basins, California, in Recent Geologic Studies in the San Francisco Bay Area, edited by E.S. Sangines, D.A. Anderson, and A.V. Busing, Publ. 76, Plume Plot. 173-192, Pac. Sect., Soc. of Econ. Paleontol. and Mineral., Santa Barbara, California.

30. LFR, Inc., 2008, Quarterly Status Report, First Quarter 2008, 1165/1175 E. Arques Avenue, Sunnyvale, California, May 5.

31. Pacific Environmental Group, Inc., 1996a, Five-Year Status Report and Effectiveness Evaluation for Subunit 2, Operable Unit 1, 1165/1175 E. Arques Avenue, Sunnyvale, California, October.

32. Pacific Environmental Group, Inc., 1996b, Confirmation Soil Boring Progam and PNA Soil Boring Plan Report, 1165/1175 E. Arques Avenue, Sunnyvale, California, September.

33. Schmidt, D.A. and R. Burgmann, 2003, Time-Dependent Land Uplift and Subsidence in the Santa Clara Valley, California, from a Large Interferometric Synthetic Aperture Radar Data Set, Journal of Geophysical Research, 108 (B9), 2416.

34. Treadwell and Rollo, Inc., 2004, Proposed Extraction System Changes, National Semiconductor Corporation, Santa Clara, California, December .

35. Treadwell and Rollo, Inc., 2006, Fifteen-Year Remedial Action Status Report and Effectiveness Evaluation, November 16.

36. Treadwell & Rollo, Inc., 2013a, 2012 Annual Groundwater Monitoring Report, Texas Instruments Incorporated, Santa Clara, California, April.

37. Treadwell and Rollo, Inc., 2013b, Site Management Plan, 1165 East Arques Avenue, Sunnyvale, California, July.

38. United States Environmental Protection Agency, 2009, Third Five-Year Review, Monolithic Memories (Advanced Micro Devices – Arques), Sunnyvale, Santa Clara County, California, September.

TABLES

TABLE I
CHRONOLOGY OF SITE INVESTIGATION AND REMEDIATION ACTIVITIES
1165/1175 E. Arques Avenue
Sunnyvale, California

Year	Activity
1982	Initial subsurface investigation (soil sampling and installation of 12 groundwater monitoring wells) performed.
	Building 2 waste solvent tank and piping removed.
	Quarterly groundwater monitoring program initiated.
1984	Building 1 acid neutralization system (ANS) and waste stripper tank removed.
	Building 2 ANS and waste reclaim tank removed.
	New ANS and waste collection system installed in Building 2.
1984 - 1991	Subsurface investigations conducted (55 soil borings and 37 groundwater monitoring wells installed).
1986	Water board issued WDR 86-64, requiring AMD to define the extent of the VOC plume.
	A-zone extraction wells E25A through E28A installed and operated.
1987	1165 E. Arques Avenue placed on the National Priority List.
	Three additional A-zone extraction wells (E38A, E39A, and E41A) installed and operated.
1988	Three B-zone extraction wells (E7B, E19B, and E20B) installed and operated.
1989	Water Board issued SCR Order Number 89-61, naming AMD responsible for chemicals in A-zone aquifer only.
1991	Water Board issued SCR Order Number 91-139, naming AMD responsible for chemicals in both A- and B-zone aquifers.
	Building 2 ANS and waste collection system shut down.
1992	Two A-zone extraction wells (E42A and E43A) installed and operated.
	Source Area 3 soil investigation performed.
1993	Soil vapor extraction (SVE) system installed and operated in Source Area 1.
1995	Source Area 1 soil boring confirmation sampling program conducted.
1995 - 1996	Source Area 2 soil investigation conducted.
1997	Groundwater monitoring program reduced to semi-annual frequency.
	Source Area 1 SVE system shut down.
1998	Groundwater monitoring program reduced to annual frequency.
2002	NSC takes over site monitoring and operation of the groundwater extraction and treatment system (GETS) in January per a private agreement with AMD.
2005	Extraction wells ME19B2, ME20B2, ME25A, ME27A, ME28A, ME39A, ME42A, and ME43A were shut down in February by NSC with Water Board approval. The wells were shut down because of low concentrations or production rates.
	The 1165/1175 E. Arques property is purchased by TWC Storage LLC (TWC) in April.
	The on-site treatment system shut down in May. Ten monitoring wells, all 7 SVE wells, 5 groundwater extraction wells (ME25A, ME26A, ME27A, ME28A, an ME20B2), and the treatment system were decommissioned to accommodate property redevelopment.
	Subsurface characterization for replacement extraction wells completed in March/April. Impacted soil discovered, designated Area 3.
	Soil sampling program conducted in March and April to delineate Area 3.
	Replacement extraction wells E44A and E45A installed in May.
	Demolition of all former site buildings and facilities by TWC began in June.
	During demolition, a transformer located near the northwest corner of the site and containing up to 250 gallons of PCE is damaged and leaks on July 15.
	Emergency response including transformer removal, soil excavation, and assessment was initiated on July 18 by Clean Harbors on behalf of TWC.

TABLE I
CHRONOLOGY OF SITE INVESTIGATION AND REMEDIATION ACTIVITIES
1165/1175 E. Arques Avenue
Sunnyvale, California

Year	Activity
2005 (cont'd)	Impacted soil discovered in July during facility demolition, designated Area 4.
	Soil sampling program conducted in July and August to delineate Area 4.
	Approximately 2,000 cubic yards (3,100 tons) of soil removed between late July and October within 2 excavation areas in the northwest corner of the property by TWC. Hydrogen Release Compound® was placed in the bottom of each excavation prior to backfilling. Soil samples were collected before, during, and after excavation activities.
	Well MM17A, located near the damaged transformer, is sampled for groundwater in October by NSC.
	Soil and groundwater investigation conducted in northwest corner of site by TWC in November.
	Soil gas, indoor air, and outdoor air sampling conducted by NSC in September and October at 1155 E. Arques (daycare). Second round of indoor air sampling conducted by TWC in December.
2006	TWC required by the Water Board to complete semiannual soil gas and indoor air sampling at 1155 E. Arques.
	Seven SVE wells installed in the northwest corner of the site and SVE feasibility test conducted by TWC in February.
	Two in situ chemical oxidation injection events conducted in the northwest corner of the site by TWC in February and March. Performance monitoring of groundwater conducted before, during, and after events.
	Soil sampling program conducted in March on 1160 Kern property. Two PCE-impacted areas identified for soil removal, designated 1160 Kern Area 1 and 1160 Kern Area 2.
	Below-grade wastewater conveyance line and associated backfill removed from 1160 Kern property in March.
	Two extraction wells (ME38A and ME42A) and four monitoring wells on the 1160 Kern property destroyed in March to facilitate termination of the lease.
	Replacement monitoring well for MM18A (destroyed in March) installed in June, designated MW18AR.
	Additional subsurface characterization of soil and groundwater in northwest corner of site conducted by TWC in October.
	Pre-excavation characterization and excavation activities conducted in November at Areas 1 and 2 (historical), Area 3 (discovered in March 2005), Area 4 (discovered in July 2005), and 1160 Kern Areas 1 and 2 (identified in March 2006). Area 3, Area 4, and 1160 Kern Areas 1 and 2 backfilled; additional excavation required for Area 2. No soil removal required in Area 1.
	Two soil sampling programs conducted to establish Area 2 extents in November and December.
	AMD terminated its lease on the 1160 Kern property at the end of the year.
2007	One additional soil sampling program conducted in Area 2 vicinity in January.
	Ownership of 1160 Kern property transferred to RAFT.
	A GETS installed by TWC. Operation with extraction from MM17A began in July.
	Four groundwater monitoring wells and nine multi-phase extraction (MPE) wells were installed in September by TWC.

TABLE I
CHRONOLOGY OF SITE INVESTIGATION AND REMEDIATION ACTIVITIES
1165/1175 E. Arques Avenue
Sunnyvale, California

Year	Activity
2008	MPE system installation completed; system combined with the GETS; combined operation began in January by TWC.
	Excavation and backfilling of Area 2 completed in September.
	Shutdown of MPE system in November.
2009	Injection of 3DMe™ substrate by TWC to propmote enhanced reductive dechlorination.
2010	Additional injection of 3DMe™ substrate by TWC.
	TWC commences semiannual groundwater monitoring.
2011	AMD conducts indoor air sampling at 1160 Kern.
	AMD conducts limited mitigation work (drain traps) and confirmation IA sampling.
2013	New restrictive covenant is recorded for 1165 Arques.
	AMD conducts preferential pathway investigation at 1160 Kern. Mitigation efforts begin.
	TWC destroys a subset of extraction, monitoring, and soil vapor wells at 1165 Arques.

Abbreviations
PCE = tetrachloroethene
VOC = volatile organic compound
Water Board = California Regional Water Quality Control Board, San Francisco Bay Region
WDR = Waste Discharge Requirements
AMD = Advanced Micro Devices, Inc.
NSC = National Semiconductor Corp.
SCR = Site Cleanup Requirements

TABLE II
CLEANUP GOALS
1165/1175 E. Arques Avenue
Sunnyvale, California

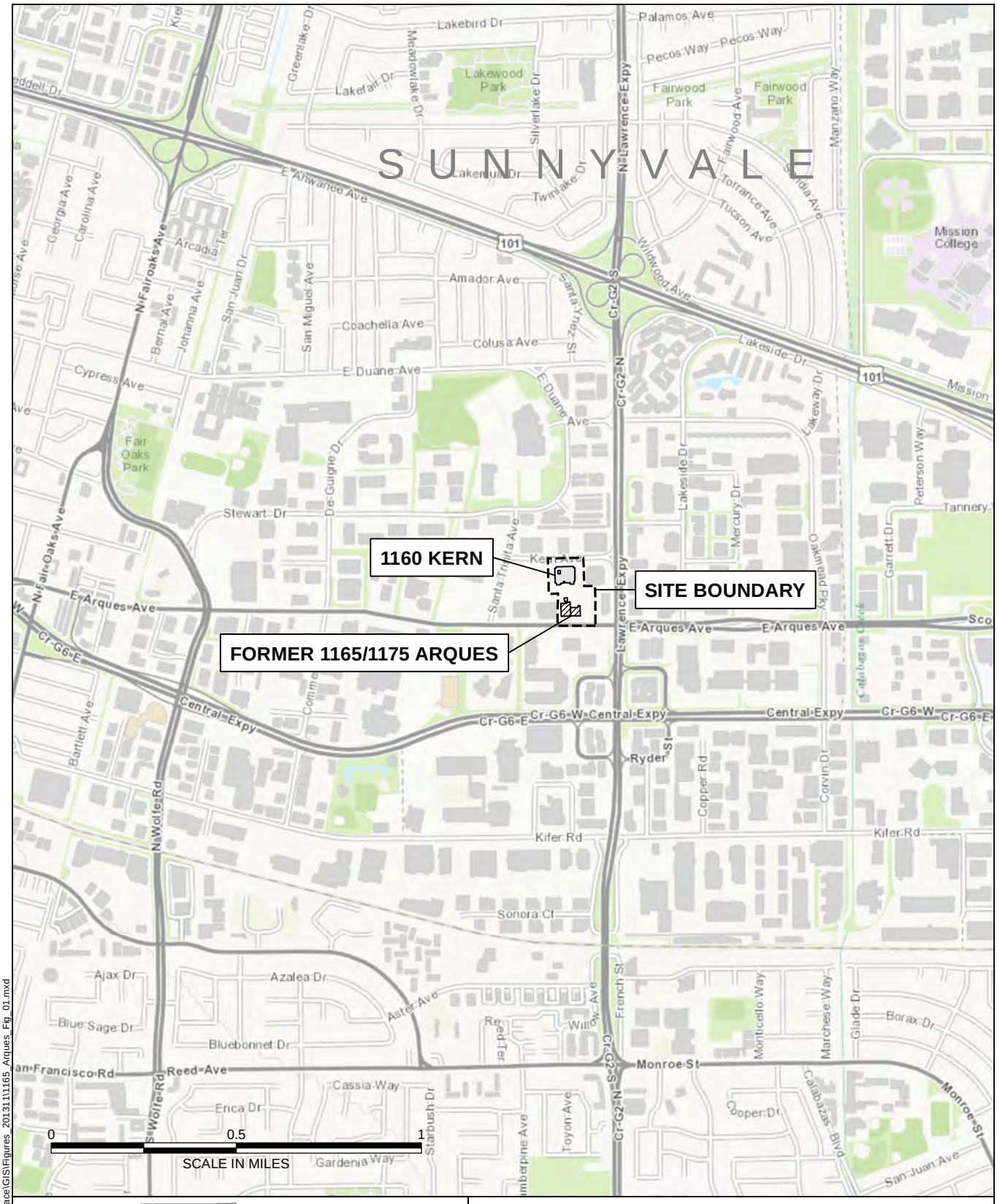
Groundwater concentrations in micrograms per liter (µg/L); and
soil concentrations in milligrams per kilogram (mg/kg).

		1991 Order	1996	2000	2013 Goal	2013 Note
Groundwater Cleanup Goals						
MMI Indicator Compounds	Tetrachloroethene	5	5	5	5	(2)
	Chlorobenzene	30	70	70	70	(1)
	1,2-Dichlorobenzene	60	60	600	600	(2)
	1,1-Dichloroethane	5	5	5	5	(1)
Off-site Indicator Compounds	Trichloroethene	5	5	5	5	(2)
	cis-1,2-Dichloroethene	6	6	6	6	(1)
	1,1-Dichloroethene	6	0.5	6	6	(1)
	1,1,1-Trichloroethane	200	200	200	200	(2)
	Trichlorotrifluoroethane (Freon 113)	1200	1200	1200	1200	(1)
Other VOCs	trans-1,2-Dichlorothene	10	10	10	10	(1)
	Vinyl chloride	0.5	0.5	0.5	0.5	(1)
	Ethylbenzene	68	700	300	300	(1)
	Xylenes (total)	175	1750	1750	1750	(1)
Soil Cleanup Goals						
Total volatile organic compounds		1	1	1	1	(3)
Total polynuclear aromatic hydrocarbons		10	10	10	10	(3)

Notes
1. Cleanup goal is the California Maximum Contaminant Level.
2. Cleanup goal is the Federal and California Maximum Contaminant Level.
3. Absolute concentration values for soil cleanup goals set forth in Order No. 91-139, San Francisco Water Quality Control Board, San Francisco Bay Region, September 20, 1991.

Abbreviation
MMI = Monolithic Memories, Inc.
VOCs = volatile organic compounds

FIGURES



HALEY & ALDRICH

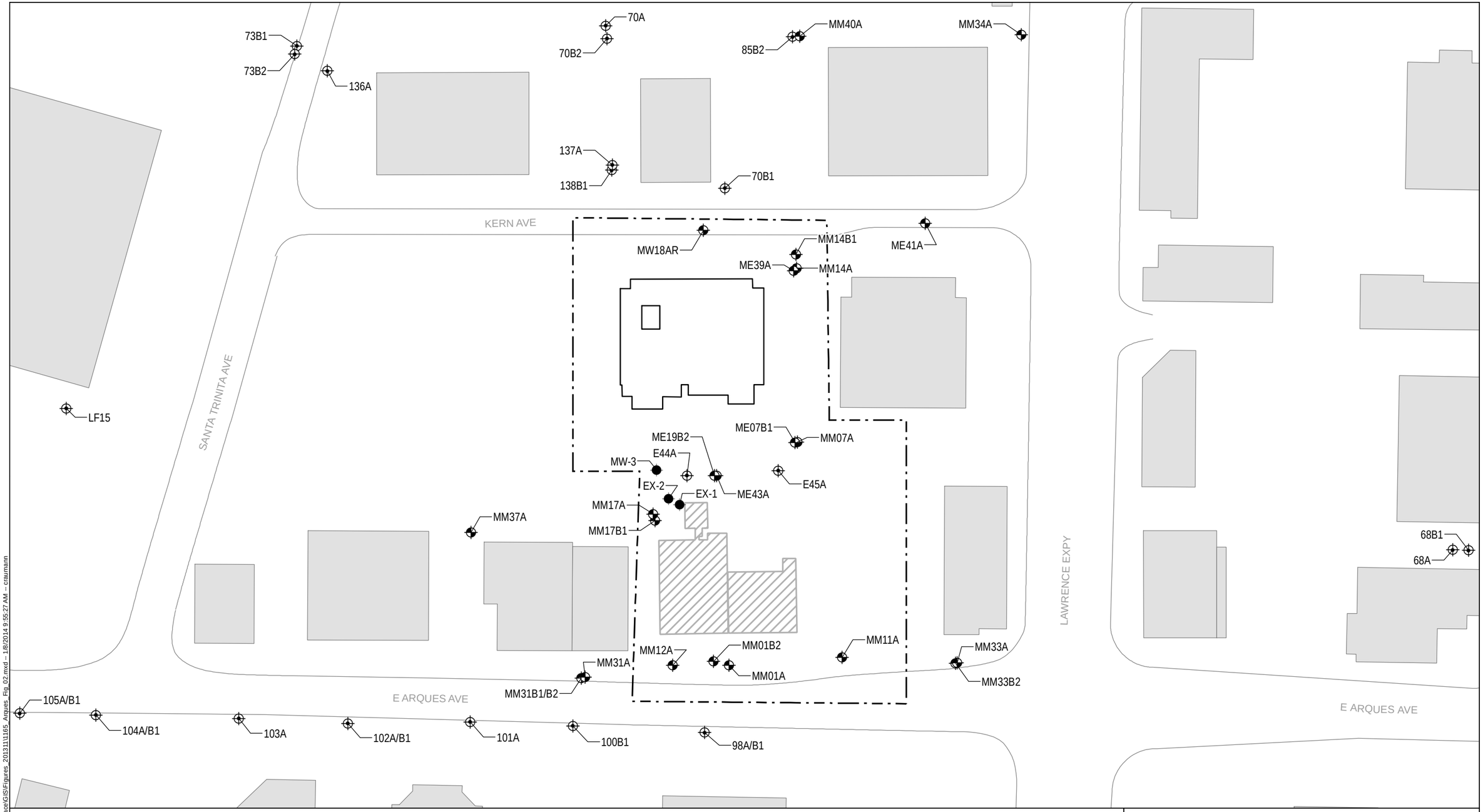
1165/1175 ARQUES AVENUE
SUNNYVALE, CALIFORNIA

SITE LOCATION MAP

SCALE: AS SHOWN
JANUary

FIGURE 1

G:\39751_AMD_Former 901-902 Thompson Place\GIS\Figures_20131111165_Arques_Fig_01.mxd



LEGEND

MONITORING WELLS

- AMD
- TEXAS INSTRUMENTS
- TWC

- SITE BOUNDARY
- CURRENT ON-SITE BUILDING
- OTHER BUILDING
- FORMER 1165/1175 ARQUES BUILDINGS

N
W E
S

0 150 300

SCALE IN FEET 1 INCH = 150 FEET

HALEY & ALDRICH

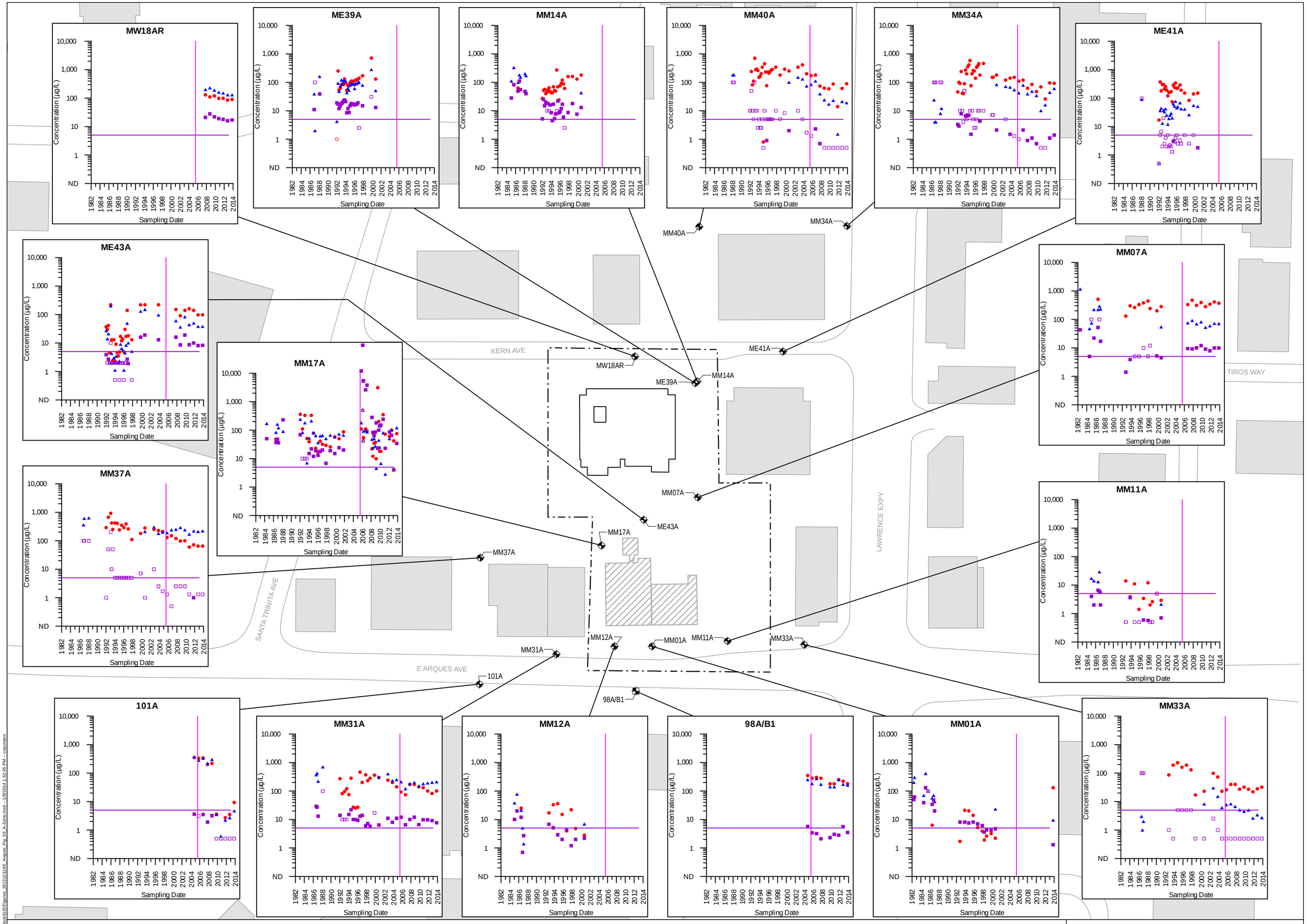
1165/1175 ARQUES AVENUE
SUNNYVALE, CALIFORNIA

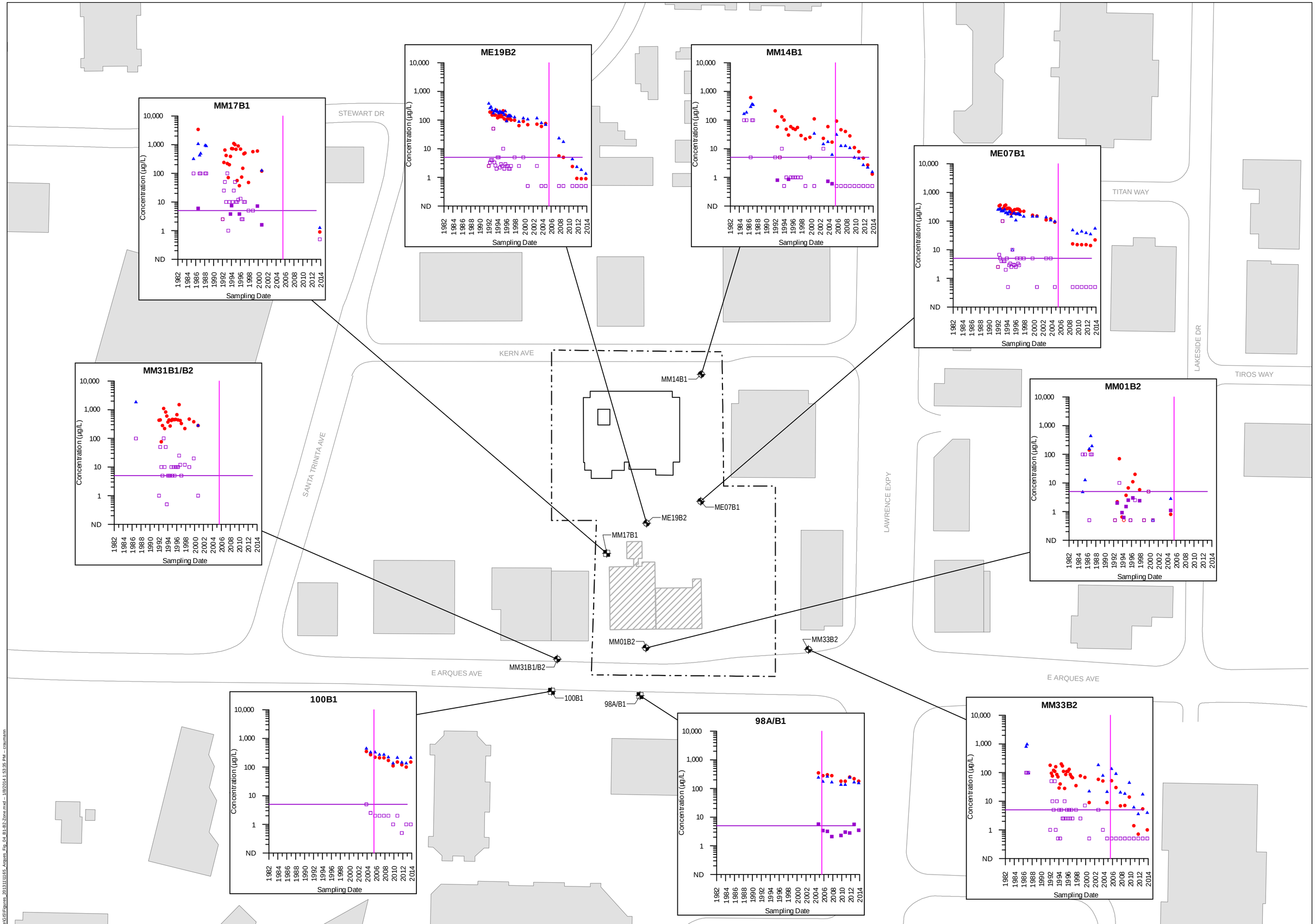
SITE PLAN AND VICINITY

SCALE: AS SHOWN
JANUARY 2014

FIGURE 2

G:\39751_AMD_Former 901-902 Thompson Place\GIS\Figures_20131111\165_Arques_Fig_02.mxd – 1/6/2014 9:55:27 AM – craumann


MW18AR
ME39A
MM14A
MM40A
MM34A
ME41A
ME43A
MM07A
MM17A
MM37A
MM11A
101A
MM31A
MM12A
98A/B1
MM01A
MM33A
Concentration (µg/L)
10,000
1,000
100
10
1
ND
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
Sampling Date
KERN AVE
E ARQUES AVE
SANTA TRINITA AVE
LAWRENCE EXPY
TIROS WAY
MW18AR
ME39A
MM14A
MM40A
MM34A
ME41A
MM07A
ME43A
MM17A
MM37A
MM11A
MM01A
MM33A
MM12A
MM31A
101A
98A/B1
PCE
TCE
cDCE
Cleanup Goal for PCE and TCE
July 2005 TWC PCE Spill
PCE = TETRACHLOROETHENE
TCE = TRICHLOROETHENE
cDCE = CIS-1,2-DICHLOROETHENE
µg/L - MICROGRAMS PER LITER
NOTE
OPEN SYMBOLS INDICATE THE ANALYTE WAS NOT DETECTED; THE CORRESPONDING VALUE IS THE LABORATORY REPORTING LIMIT.
LEGEND
A-ZONE MONITORING WELL
EXTRACTION WELL
SITE BOUNDARY
CURRENT ON-SITE BUILDING
OTHER BUILDING
FORMER 1165/1175 ARQUES BUILDINGS
N
W
E
S
0
150
300
SCALE IN FEET
1 INCH = 150 FEET
HALEY & ALDRICH
1165/1175 ARQUES AVENUE
SUNNYVALE, CALIFORNIA
CONCENTRATION TRENDS FOR A-ZONE WELLS
SCALE: AS SHOWN
JANUARY 2014
FIGURE 3
G:\99751_AMD_Former 901-967 Thompson Place\GIS\Figures_2013\111165_Arques_Fig_03_A-Zone.mxd -- 1/8/2014 1:52:45 PM -- crawmann



PCE
TCE
cDCE
Cleanup Goal for PCE and TCE
July 2005 TWC PCE Spill

PCE = TETRACHLOROETHENE
TCE = TRICHLOROETHENE
cDCE = CIS-1,2-DICHLOROETHENE
µg/L - MICROGRAMS PER LITER

NOTE
OPEN SYMBOLS INDICATE THE ANALYTE WAS NOT DETECTED; THE CORRESPONDING VALUE IS THE LABORATORY REPORTING LIMIT.

LEGEND

- B-ZONE MONITORING WELL
- EXTRACTION WELL
- SITE BOUNDARY
- CURRENT ON-SITE BUILDING
- OTHER BUILDING
- FORMER 1165/1175 ARQUES BUILDINGS

N
W E
S

0 150 300
SCALE IN FEET 1 INCH = 150 FEET

HALEY & ALDRICH

1165/1175 ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR B-ZONE WELLS

SCALE: AS SHOW
JANUARY 2014

FIGURE 4

G:\39751_AMD_Former 901-902 Thompson Place\GIS\Figures_2013111165_Arques_Fig_04_B1-B2-Zone.mxd -- 1/8/2014 1:53:35 PM -- cnaumann

APPENDIX A

Title Search

1165 East Arques Ave
1165 East Arques Avenue
Sunnyvale, CA 94085

Inquiry Number: 3752184.3
October 09, 2013

EDR Environmental Lien and AUL Search

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Environmental Lien and AUL Search

The EDR Environmental Lien and AUL Search Report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied address information to:

- search for parcel information and/or legal description;
- search for ownership information;
- research official land title documents recorded at jurisdictional agencies such as recorders' offices, registries of deeds, county clerks' offices, etc.;
- access a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument(s) (title, parties involved, and description); and
- provide a copy of the deed or cite documents reviewed.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EDR Environmental Lien and AUL Search

TARGET PROPERTY INFORMATION

ADDRESS

1165 East Arques Avenue
1165 East Arques Ave
Sunnyvale, CA 94085

RESEARCH SOURCE

Source 1:

Santa Clara Recorder
Santa Clara, CA

PROPERTY INFORMATION

Deed 1:

Type of Deed:	deed
Title is vested in:	ExStra Arques LLC
Title received from:	TWC Storage LLC
Deed Dated	3/7/2001
Deed Recorded:	3/27/2001
Book:	NA
Page:	na
Volume:	na
Instrument:	na
Docket:	NA
Land Record Comments:	
Miscellaneous Comments:	
Legal Description:	See Exhibit
Legal Current Owner:	ExStra Arques LLC
Parcel # / Property Identifier:	205-24-013
Comments:	See Exhibit

ENVIRONMENTAL LIEN

Environmental Lien: Found ☐ Not Found ☒

EDR Environmental Lien and AUL Search

OTHER ACTIVITY AND USE LIMITATIONS (AULS)

AULs: Found ☒ Not Found ☐

If found:

1st Party:	na
2nd Party:	na
Dated:	3/24/2008
Recorded:	7/24/2008
Book:	NA
Page:	na
Docket:	NA
Volume:	na
Instrument:	na
Comments:	
Miscellaneous Comments:	

If found:

1st Party:	na
2nd Party:	na
Dated:	4/28/2005
Recorded:	4/29/2005
Book:	NA
Page:	na
Docket:	NA
Volume:	na
Instrument:	na
Comments:	
Miscellaneous Comments:	

If found:

1st Party:	na
2nd Party:	na
Dated:	3/7/2013
Recorded:	3/13/2013
Book:	NA
Page:	na
Docket:	NA
Volume:	na
Instrument:	na
Comments:	
Miscellaneous Comments:	

Deed Exhibit 1

FirstAmerican NCS-337599-SC

RECORDING REQUESTED BY AND
WHEN RECORDED MAIL TO:

ExStra-Arques, LLC
c/o Dollinger Properties
555 Twin Dolphin Drive, #600
Redwood City, California 94065
Attention: Dave Dollinger

DOCUMENT: 22151702

Pages: 4

Fees 54 00
Taxes ++ Conf ++
Copies
AMT PAID 54 00

REGINA ALCOMENDRAS
SANTA CLARA COUNTY RECORDER
Recorded at the request of
Document Processing Solutions

RDE # 025
3/29/2013
8:00 AM

FILOR REQUESTS
DO NOT RECORD STAMP VALUE

(Above Space for Recorder's Use Only)

Documentary Transfer Tax - Not of Record

APN – 205-24-013

City of Sunnyvale, County of Santa Clara, California

GRANT DEED

FOR VALUE RECEIVED, TWC Storage, LLC, a California limited liability company GRANTS to ExStra-Arques LLC, a Delaware limited liability company ("***Grantee***"), all that certain real property (the "***Property***") situated in the City of Sunnyvale, County of Santa Clara, State of California, described on Exhibit "A" attached hereto and by this reference incorporated herein, subject to all matters of record.

The land described herein contains hazardous materials in soil and in the groundwater under the Property, and is subject to a deed restriction dated as of March 13, 2013, and recorded on March 19, 2013, in the Official Records of Santa Clara County, California, as Document No. 22137440 which Covenant and Restriction imposes certain covenants, conditions, and restrictions on usage of the property described herein. This statement is not a declaration that a hazard exists.

(signatures to follow on succeeding page)

Mail taxes to address shown above.

[Signature page to Grant Deed for APN 205-24-013, County of Santa Clara, California]

TWC Storage, LLC
a California limited liability company

By: _____
Name: James Sturdivant AKA James m. Sturdivant
Its: Vice President - Manager

STATE OF OKLAHOMA)
)
COUNTY OF TULSA)

On March 7, 2013, before me, Cynthia L. Squier, Notary Public
Date Here Insert Name and Title of the Notary

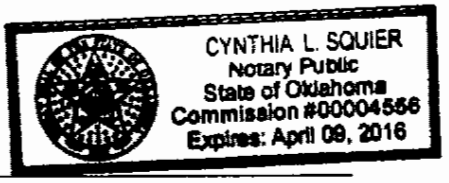
personally appeared James M. Sturdivant
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Cynthia L. Squier
Signature of Notary Public



Place Notary Seal Above

EXHIBIT A TO GRANT DEED

LEGAL DESCRIPTION

Real property in the City of Sunnyvale, County of Santa Clara, State of California, described as follows:

PARCEL ONE:

PARCEL "A", AS SHOWN ON THAT CERTAIN MAP ENTITLED, "PARCEL MAP BEING A MERGER OF ALL OF PARCEL "A" OF PARCEL MAP RECORDED IN BOOK 325, MAPS, AT PAGE 40 AND ALL OF PARCEL "A" OF PARCEL MAP RECORDED IN BOOK 231, MAPS, AT PAGE 55, SANTA CLARA COUNTY RECORDER," WHICH MAP WAS FILED FOR RECORD IN THE OFFICE OF THE RECORDER OF THE COUNTY OF SANTA CLARA, STATE OF CALIFORNIA ON FEBRUARY 27, 1987, IN BOOK 571 OF MAPS PAGE(S) 35.

PARCEL TWO:

EASEMENT FOR INGRESS AND EGRESS OVER THE SOUTH 310.60 FEET OF THE EAST 13 FEET OF PARCEL 4 OF PARCEL MAP RECORDED IN BOOK 248 OF MAPS, PAGE 51, AS GRANTED IN THE DEED TO MINI-LAND INC., A CALIFORNIA CORPORATION RECORDED AUGUST 25, 1969 IN BOOK 8648, PAGE 731.

APN: 205-24-013

ACTIVITY AND USE LIMITATIONS (AULS) EXHIBITS

RECORDING REQUESTED BY

NAME: TWC Storage, LLC

WHEN RECORDED MAIL TO:

NAME: Bruce H. Wolfe, Executive Officer
California RWQCB, S.F. Bay Region

ADDRESS: 1515 Clay St., Suite 1400

CITY/STATE/ZIP: Oakland, CA 94612

* with a copy to Advanced Micro Devices, as indicated on the following page.

(DOCUMENT WILL ONLY BE RETURNED TO NAME & ADDRESS IDENTIFIED ABOVE)

DOCUMENT: 19933753

Pages: 17

Fees. 57.00
Taxes.
Copies
AMT PAID 57 00

REGINA ALCOMENDRAS
SANTA CLARA COUNTY RECORDER
Recorded at the request of
Attorney

RDE # 011
7/24/2008
10:41 AM

(SPACE ABOVE FOR RECORDER'S USE)

Covenant and Environmental Restriction on Property 1165 East Arques Avenue, Sunnyvale, Santa Clara County, CA

(DOCUMENT TITLE)

SEPARATE PAGE, PURSUANT TO CA. GOV'T. CODE 27361.6

Recording Requested by:
TWC Storage, LLC
1100 ONEOK Plaza
100 West Fifth Street
Tulsa, OK 74103-4217

When Recorded, Mail to:
Bruce H. Wolfe, Executive Officer
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

With a copy to:
Department of Global Real Estate, M/S 68
Advanced Micro Devices, Inc.
One AMD Place
PO Box 3453
Sunnyvale, CA 94088

COVENANT AND ENVIRONMENTAL RESTRICTION

ON PROPERTY

1165 East Arques Avenue, Sunnyvale, Santa Clara County, California

This Covenant and Environmental Restriction on Property ("Covenant") is made effective as of the 29th day of April, 2005, by TWC Storage, LLC and its successors and assigns, if any ("Covenantor"), who is the Owner of record of that certain property situated at 1165 East Arques Avenue, in the City of Sunnyvale, County of Santa Clara, State of California, which is more particularly described in Exhibit A attached hereto and incorporated herein by this reference (such portion hereinafter referred to as the "Burdened Property"), for the benefit of the California Regional Water Quality Control Board, San Francisco Bay Region (the "Water Board"), with reference to the following facts:

RECITALS

A. The Burdened Property and groundwater underlying the property contain hazardous materials.

B. The Water Board has determined that this Covenant is reasonably necessary to protect present or future public health and safety or the environment as a result of the presence on the Burdened Property of hazardous materials as defined in California Health and Safety Code (H&SC) section 25260. As a result of such determination, the Burdened Property has been subjected to certain restrictions pursuant to Order No. 91-139, adopted September 18, 1991, by the Water Board.

C. Contamination of the Burdened Property. In Water Board Order No. 91-139, the Water Board found that soil at the Burdened Property was contaminated by releases of volatile organic chemicals from semiconductor manufacturing operations conducted by Monolithic Memories, Inc., a predecessor of Advanced Micro Devices, Inc. ("AMD"), at 1165 East Arques Avenue, and by operations of National Semiconductor Corporation and United Technologies Corporation at facilities hydrogeologically upgradient of the Burdened Property. The Water Board found that such operations resulted in contamination of soil and groundwater with organic chemicals including tetrachloroethylene, trichloroethylene, 1,2-dichloroethylene, xylenes, chlorobenzene, phenols, and polynuclear aromatic compounds, including naphthalene and pyrene, all of which constitute hazardous materials as that term is defined in Health & Safety Code Section 25260. In compliance with Water Board Order No. 91-139, AMD conducted soil removal at the Burdened Property, and a pump and treat system is now operating for ground water in underlying aquifers.

D. Exposure Pathways. The contaminants addressed in this Covenant are present in soil and groundwater on the Burdened Property. Without the mitigation measures which have been performed on the Burdened Property, exposure to these contaminants could take place via in-place contact, ingestion of groundwater, or intrusion of vapors into indoor air and inhalation. The risk of public exposure to the contaminants has been substantially lessened by the remediation and controls described herein.

E. Adjacent Land Uses and Population Potentially Affected. The Burdened Property is currently vacant. Covenantor intends to construct a self-storage facility on the Burdened Property. The parcels adjacent to and contiguous with the Burdened Property have, to the best of

Covenantor's knowledge as of the date of this Covenant, the following uses: 1) The parcel to the east contains an office building(s) that is occupied and used by a physician(s) for that individual(s) medical practice; 2) the parcel to the north contains a presently unoccupied office building(s) under lease by AMD; and 3) the parcel to the west contains an office building(s) that is occupied by a child care facility.

F. Full and voluntary disclosure to the Water Board of the presence of hazardous materials on the Burdened Property has been made and extensive sampling of the Burdened Property has been conducted.

G. Covenantor now desires to impose certain additional restrictions on the use of the Burdened Property, which restrictions are reasonably necessary to protect present or future human health or safety or the environment as a result of the presence on the Burdened Property of hazardous materials, as defined in Section 25260 of the California Health and Safety Code, and it is the intent of Covenantor that it and all owners and occupants of the Burdened Property shall be subject to and bound to comply with the restrictions set forth herein.

H. Covenantor desires and intends that in order to benefit the Water Board, and to protect the present and future public health and safety, the Burdened Property shall be used in such a manner as to avoid potential harm to persons or property that may result from hazardous materials that may have been deposited on portions of the Burdened Property.

ARTICLE I.
GENERAL PROVISIONS

1.1 Restrictions to Run with the Land. This Covenant sets forth protective provisions, covenants, conditions and restrictions (collectively referred to as "Restrictions"), subject to which the Burdened Property and every portion thereof shall be improved, held, used, occupied, leased, sold, hypothecated, encumbered and/or conveyed. The restrictions set forth in Article III are reasonably necessary to protect present and future human health and safety or the environment as a result of the presence on the land of hazardous materials. Each and all of the Restrictions shall run with the land, and pass with each and every portion of the Burdened Property, and shall apply to,

inure to the benefit of, and bind the respective successors in interest thereof, for the benefit of the Water Board and all Owners and Occupants. Each and all of the Restrictions are imposed upon the entire Burdened Property unless expressly stated as applicable to a specific portion of the Burdened Property. Each and all of the Restrictions run with the land pursuant to section 1471 of the Civil Code. Each and all of the Restrictions are enforceable by the Water Board.

1.2 Binding Upon Owners/Occupants. All purchasers, lessees, or possessors of any portion of the Burdened Property shall be deemed by their purchase, leasing, or possession of such Burdened Property, to be in accord with the foregoing and to agree for and among themselves, their heirs, successors, and assignees, and the agents, employees, and lessees of such owners, heirs, successors, and assignees, that the Restrictions as herein established must be adhered to for the benefit of the Water Board and the Owners and Occupants of the Burdened Property and that the interest of the Owners and Occupants of the Burdened Property shall be subject to the Restrictions contained herein. Pursuant to H&S Code section 25355.5(a)(1)(C), this Covenant binds all Owners and Occupants. Pursuant to Civil Code section 1471(b), all Owners of the Burdened Property are expressly bound hereby for the benefit of Covenantor and the Water Board.

1.3 Incorporation into Deeds and Leases. Covenantor desires and covenants that the Restrictions set out herein shall be incorporated by reference in each and all deeds and leases of any portion of the Burdened Property. Recordation of this Covenant shall be deemed binding on all successors, assigns, and lessees, regardless of whether a copy of this Covenant has been attached to or incorporated into any given deed or lease.

1.4 Written Notice of Release of Hazardous Substances. Prior to the sale, lease or sublease of the Burdened Property, the Owner or Occupant shall give the buyer, lessee, or sublessee notice that hazardous substances are located on or beneath the Burdened Property, as required by H&SC section 25359.7.

ARTICLE II.
DEFINITIONS

2.1 Improvements. "Improvements" means all buildings, roads, driveways, regrading, and paved parking areas, constructed or placed upon any portion of the Burdened Property.

2.2 Occupant. "Occupant" means any Owner and any person or entity entitled by ownership, leasehold, or other legal relationship to occupy any portion of the Burdened Property.

2.3 Owner(s). "Owner(s)" means Covenantor and any and all successors in interest to Covenantor, including without limitation all donees and purchasers of Covenantor's interest in the Burdened Property, and their respective successors in interest, including heirs and assigns, who at any time hold fee title to all or any portion of the Burdened Property.

ARTICLE III.
DEVELOPMENT, USE, AND CONVEYANCE OF THE PROPERTY

3.1 Restrictions on Development and Use. Each and every Owner and Occupant shall restrict the use of the Burdened Property as follows:

a. The Burdened Property shall be restricted to commercial or industrial uses.

b. Residential development for human habitation shall not be permitted on the Burdened Property; provided, however, that no more than one (1) residential dwelling unit ancillary to the primary use of the Burdened Property may be constructed and inhabited at the Burdened Property, so long as (i) such unit is located above ground level, and (ii) the Owner or Occupant constructing such unit utilizes commercially reasonable construction techniques (such as vapor barriers) to minimize the potential for contact between individuals residing in such unit and hazardous materials that may be present in the soil or groundwater of the Burdened Property.

c. Hospitals or health clinics for humans shall not be constructed on the Burdened Property.

d. Day-care centers for either children or senior citizens shall not be permitted on the Burdened Property.

e. Schools for children under 21 years of age shall not be permitted on the Burdened Property.

f. No drilling for drinking water, oil, or gas shall be permitted on the Burdened Property.

g. No extraction (except for necessary construction site dewatering), utilization or consumption of water from groundwater beneath the Burdened Property.

h. No disposal of extracted groundwater from construction site dewatering into the waters of the State except in compliance with the requirements of the Water Board.

i. No activities (e.g., excavation, grading, removal, trenching, filling, earth movement, or mining) that will disturb the soil beneath the Burdened Property shall be permitted on the Burdened Property without a Soil Management Plan and a Health and Safety Plan submitted to the Water Board for review and approval.

j. Any soils brought to the surface by grading, excavating, trenching or backfilling shall be managed in accordance with applicable provisions of state and federal law.

k. The Owner(s)/Occupant(s) shall notify AMD and the Water Board of each of the following: (i) excavation, trenching or digging of soil below 2.5 feet in depth; and (ii) extraction of groundwater for any purpose. Notification to AMD shall be made by registered or certified mail ten (10) working days prior to excavation, trenching or digging of soil or extraction of groundwater for any purpose. Timely and accurate notification by any Owner or Occupant shall satisfy this requirement on behalf of all other Owners and Occupants.

l. The Owner(s)/Occupant(s) shall allow AMD, its successors or assigns, and the Water Board access to the Burdened Property for inspection, surveillance, monitoring, maintenance, and other activities consistent with the purposes of this Covenant as deemed necessary by AMD or the Water Board.

3.2 Conveyance of Property. The Owner(s) shall provide a notice to AMD not later than thirty (30) days after any sale, lease or other conveyance of the Burdened Property or a real property estate in the Burdened Property. AMD shall not, by these provisions, have authority to approve, disapprove, or otherwise affect any such sale, lease, or other conveyance of the Burdened Property or estate except as otherwise provided by law, by administrative order, or by reason of this Covenant.

3.3 Enforcement. Failure of an Owner or Occupant to comply with any of the restrictions, as set forth in paragraph 3.1, shall be grounds for the Water Board, by reason of this Covenant, to have the authority to require that the Owner modify or remove any Improvements constructed in violation of that paragraph. Violation of the Covenant shall be grounds for the Water Board to file civil actions against the Owner as provided by law.

3.4 Notice in Agreements. After the date of recordation hereof, all Owners and Occupants shall execute a written instrument which shall accompany all purchase agreements or leases relating to the Burdened Property. Any such instrument shall contain the following statement:

> The land described herein contains hazardous materials in soils and in the ground water under the property, and is subject to a deed restriction dated as of April 29, 2005, and recorded on _____, 2008, in the Official Records of Santa Clara County, California, as Document No. _____, which Covenant and Restriction imposes certain covenants, conditions, and restrictions on usage of the property described herein. This statement is not a declaration that a hazard exists.

ARTICLE IV.
VARIANCE AND TERMINATION

4.1 Variance. Any Owner or, with the Owner's consent, any Occupant of the Burdened Property or any portion thereof may apply to the Water Board for a written variance from the provisions of this Covenant.

4.2 Termination. Any Owner or, with the Owner's consent, any Occupant of the Burdened Property or a portion thereof may apply to the Water Board for a termination of the Restrictions as they apply to all or any portion of the Burdened Property.

4.3 Term. Unless terminated by law or in accordance with paragraph 4.2, this Covenant shall continue in effect in perpetuity.

ARTICLE V.
MISCELLANEOUS

5.1 No Dedication Intended. Nothing set forth herein shall be construed to be a gift or dedication, or offer of a gift or dedication, of the Burdened Property or any portion thereof to the general public or anyone else for any purpose whatsoever.

5.2 Notices. Whenever any person gives or serves any notice, demand, or other communication with respect to this Covenant, each such notice, demand, or other communication shall be in writing and shall be deemed effective (i) when delivered, if personally delivered to the person being served or to an officer of a corporate party being served or official of a government agency being served, or, (ii) three (3) business days after deposit in the mail if mailed by United States mail, postage paid and certified, return receipt requested:

To: "Covenantor":	TWC Storage, LLC 1100 ONEOK Plaza 100 West Fifth Street Tulsa, OK 74103-4217
To: "AMD":	Department of Global Real Estate, M/S 68 Advanced Micro Devices, Inc. One AMD Place PO Box 3453 Sunnyvale, CA 94088
With a carbon copy to:	General Counsel 7171 Southwest Parkway M/S B100.T.432 Austin, TX 78735
To "Water Board":	California Regional Water Quality Control Board, San Francisco Bay Region Attn: Executive Officer 1515 Clay Street Suite 1400 Oakland, CA 94612

5.3 Partial Invalidity. If any portion of the Restrictions or terms set forth herein is determined to be invalid for any reason, the remaining portion shall remain in full force and effect as if such portion had not been included herein.

5.4 Article Headings. Headings at the beginning of each numbered article of this Covenant are solely for the convenience of the parties and are not a part of the Covenant.

5.5 Recordation. This instrument shall be executed by Covenantor, acknowledged by AMD and recorded in the Official Records.

5.6 References. All references to Code sections include successor provisions.

5.7 Construction. Any general rule of construction to the contrary notwithstanding, this instrument shall be liberally construed in favor of the Covenant to effect the purpose of this instrument and the policy and purpose of the Water Code. If any provision of this instrument is found to be ambiguous, an interpretation consistent with the purpose of this instrument that would render the provision valid shall be favored over any interpretation that would render it invalid.

This Covenant shall wholly supercede that Certain Covenant to Restrict Use of Property (Environmental Restrictions) dated effective as of April 29, 2005, and recorded on April 29, 2005, in the Official Records of Santa Clara County, California as Document No. 18347620 ("Prior Covenant") made by AMD as "Declarant" and acknowledged by Sunnyvale Community Services, a California non-profit corporation ("SCS"). AMD and SCS execute this Covenant for the sole purpose of acknowledging that the Prior Covenant is hereby terminated, and is superceded in its entirety by this Covenant.

IN WITNESS WHEREOF, the parties execute this Covenant as of the date set forth above.

TWC Storage, LLC

By: _____

Title: James M. Strudivant VP Tesla Land Corp.

Date: 3/24/08

Acknowledged by:

STATE OF CALIFORNIA, REGIONAL WATER QUALITY CONTROL BOARD, SAN FRANCISCO BAY REGION

By: _____

Title: Executive Officer

Date: May 23, 2008

ADVANCED MICRO DEVICES, INC.,
a Delaware corporation

By: _____ CRAIG SAGER

Title: DIRECTOR GLOBAL CORPORATE SVCS

Date: 28 MARCH 2008

SUNNYVALE COMMUNITY SERVICES,
a California non-profit corporation

By: _____

Title: EXECUTIVE DIRECTOR

Date: May 16, 2008

Exhibit A

Legal Description:

Real Property in the City of Sunnyvale, County of Santa Clara, State of California, described as follows:

PARCEL ONE:

Parcel "A", as shown on that certain Map entitled, "Parcel Map being a merger of all of Parcel "A" of Parcel Map recorded in Book 325, Maps, at page 40 and all of Parcel "A" of parcel Map recorded in Book 231, Maps, at page 55, Santa Clara County Recorder," which Map was filed for record in the office of the Recorder of the County of Santa Clara, State of California on February 27, 1987, in Book 571 of Maps page(s) 35.

PARCEL TWO:

Easement for ingress and egress over the South 310.60 feet of the East 13 feet of Parcel 4 of Parcel Map recorded in Book 248 of Maps, page 51, as granted in the Deed to Mini-land Inc., a California corporation recorded August 25, 1969 in Book 8648, page 731.

APN: 205-24-013

ARB: 206-61-049,050,051

STATE OF ~~CALIFORNIA~~ OKLAHOMA)

)

COUNTY OF TULSA)

On 3/24/08, before me, a Notary Public in and for State of ~~California~~ Oklahoma, personally appeared JAMES M. STURDIVANT, personally known to me or proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/~~she~~ executed the same in his/~~her~~ authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Donna J. Mills

Notary's Signature

DONNA J. MILLS
Notary Public
State of Oklahoma
Commission # 02020884
Expires: January 28, 2011

STATE OF CALIFORNIA)

)

COUNTY OF _____)

On _____, before me, a Notary Public in and for State of California, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

_____

Notary's Signature

STATE OF ~~CALIFORNIA~~ Texas LV

)

COUNTY OF Travis)

On 3/28/08, before me, a Notary Public in and for State of ~~California~~ Texas LV, personally appeared Craig Garcia, personally known to me or proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Lisa H Vyvjala

Notary's Signature

LISA H. VYVJALA
MY COMMISSION EXPIRES
September 15, 2011

STATE OF CALIFORNIA)

)

COUNTY OF Santa Clara)

On 5-16-08, before me, a Notary Public in and for State of California, personally appeared Nancy S Tivol, ~~personally known to me or~~ proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that ~~he~~/she executed the same in ~~his~~/her authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Cetta McCarthy

Notary's Signature

CETTA MCCARTHY
Comm. # 1545733
NOTARY PUBLIC-CALIFORNIA
County of Santa Clara
My Comm. Expires Feb. 15, 2009

CALIFORNIA ALL-PURPOSE CERTIFICATE OF ACKNOWLEDGMENT

State of California

County of ALAMEDA

On MAY 23, 2008 before me, VERONICA A. YOUNG, NOTARY PUBLIC
(Here insert name and title of the officer)

personally appeared BRUCE H. WOLFE

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Veronica A. Young 05/23/2008
Signature of Notary Public (Notary Seal)

VERONICA A. YOUNG
Commission # 1775703
Notary Public - California
Alameda County
My Comm. Expires Nov 4, 2011

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

DEED RESTRICTION
(Title or description of attached document)

1165 EAST ARQUES SUNNYVALE CA
(Title or description of attached document continued)

Number of Pages 15 Document Date 04/29/08 04/29/05

SANTA CLARA COUNTY
(Additional information)

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer
  EXECUTIVE OFFICER
  (Title)
- ☐ Partner(s)
- ☐ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

INSTRUCTIONS FOR COMPLETING THIS FORM

Any acknowledgment completed in California must contain verbiage exactly as appears above in the notary section or a separate acknowledgment form must be properly completed and attached to that document. The only exception is if a document is to be recorded outside of California. In such instances, any alternative acknowledgment verbiage as may be printed on such a document so long as the verbiage does not require the notary to do something that is illegal for a notary in California (i.e. certifying the authorized capacity of the signer). Please check the document carefully for proper notarial wording and attach this form if required.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he/she/they,~~ ~~is /are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk
  - Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document
  - Indicate title or type of attached document, number of pages and date.
  - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document

DOCUMENT: 18346720

Pages: 11

Fees.... 37.00
Taxes...
Copies..
AMT PAID 37.00

BRENDA DAVIS
SANTA CLARA COUNTY RECORDER
Recorded at the request of
First American Title Company

RDE # 008
4/29/2005
8:00 AM

Recording Requested by:

First American Title
NCS-13093-SC

When Recorded, Mail to:

Department of Global Real Estate, M/S
Advanced Micro Devices, Inc.
One AMD Place
PO Box 3453
Sunnyvale, CA 94088

COVENANT

TO RESTRICT USE OF PROPERTY

(ENVIRONMENTAL RESTRICTIONS)

1165 Arques Avenue, Sunnyvale, California

This Covenant To Restrict Use of Property ("Covenant") is made effective as of the 29 day of April, 2005, by Advanced Micro Devices, Inc. and its successors and assigns, if any ("Declarant") and acknowledged by Sunnyvale Community Services, a California non-profit corporation, and its successors and assigns ("SCS").

RECITALS

A. Declarant is the owner of record of that certain real property situated in the City of Sunnyvale, County of Santa Clara, State of California, commonly known as 1165 Arques Avenue (the "Property"). A legal description of the Property is set forth in Exhibit A and is incorporated here by this reference. Declarant desires to donate the Property to SCS and contemporaneously with the execution of this Covenant has executed a Definitive Agreement conveying the Property to SCS, such conveyance contingent upon SCS's successful sale of the Property to a third party.

B. It is the intent of Declarant that SCS and all Owners of the Property shall be subject to and bound to comply with the restrictions set forth herein.

C. Pursuant to Civil Code section 1471(c), the Board has determined that this Covenant is reasonably necessary to protect present or future public health and safety or the environment as a result of the presence on the Property of hazardous materials as defined in California Health and Safety Code (H&SC) section 25260. As a result of such determination, the Property has been subjected to certain restrictions pursuant to Order No. 91-139 as more fully described in the Statement of Facts below.

D. Declarant now desires to impose certain additional restrictions on the use of the Property, which restrictions are reasonably necessary to protect present or future human health or safety or the environment as a result of the presence on the Property of hazardous materials, as defined in Section 25260 of the California Health and Safety Code, and it is the intent of Declarant that SCS and all owners and occupants of the Property shall be subject to and bound to comply with the restrictions set forth herein.

ARTICLE I.
STATEMENT OF FACTS

1.1 Description of contamination.

The Property is subject to Order No. 91-139, adopted September 18, 1991, by the California Regional Water Quality Control Board, San Francisco Bay Region (the "Board"). Pursuant to the Order, Declarant maintains and operates a pump and treat system for ground water in underlying aquifers and multiple test wells.

1.2 Surrounding Land Use.

The parcels adjacent to and contiguous with the Property have, to the best of Declarant's knowledge as of the date of this Covenant, the following uses: 1) The parcel to the East contains an office building(s) that is occupied and used by a physician(s) for that individual(s) medical practice; 2) The parcel to the North contains a presently unoccupied office building(s) under lease by Declarant; and 3) The parcel to the West contains an office building(s) that is occupied by a child care facility.

ARTICLE II.
DEFINITIONS

2.1 Improvements. "Improvements" means all buildings, roads, driveways, regrading, and paved parking areas, constructed or placed upon any portion of the Property.

2.2 Occupant. "Occupant" means any Owner and any person or entity entitled by ownership, leasehold, or other legal relationship to occupy any portion of the Property.

2.3 Owner(s). "Owner(s)" means any and all successors in interest to Declarant, including without limitation all donees and purchasers of Declarant's interest in the Property, and their respective successors in interest, including heirs and assigns, who at any time hold fee title to all or any portion of the Property..

2.4 Department. "Department" means the California Environmental Protection Agency, Department of Toxic Substances Control, and its successor agencies, if any.

ARTICLE III.
GENERAL PROVISIONS

3.1 Restrictions to Run with the Land. This Covenant sets forth protective provisions, covenants, restrictions, and conditions (collectively referred to as "Restrictions"), subject to which the Property and every portion thereof shall be improved, held, used, occupied, leased, sold, hypothecated, encumbered and/or conveyed. Each and every Restriction: (a) runs with the land pursuant to H&SC section 25355.5(a)(1)(C) and Civil Code section 1471; (b) inures to the benefit of and passes with each and every portion of the Property; (c) is for the benefit of, and is enforceable by the Declarant; and (d) is imposed upon the entire Property unless expressly stated as applicable only to a specific portion thereof.

3.2 Binding Upon Owners/Occupants. Pursuant to H&SC section 25355.5(a)(1)(C), this Covenant binds all Owners and Occupants. Pursuant to Civil Code section 1471(b), all Owners of the Property are expressly bound hereby for the benefit of the Declarant.

3.3 Written Notice of Release of Hazardous Substances. Prior to the sale, lease or sublease of the Property, the Owner or Occupant shall give the buyer, lessee, or sublessee

notice that hazardous substances are located on or beneath the Property, as required by H&SC section 25359.7.

3.4 Incorporation into Deeds and Leases. The Restrictions set forth herein shall be incorporated by reference in each and all deeds and leases of any portion of the Property.

ARTICLE IV.
DEVELOPMENT, USE, AND CONVEYANCE OF THE PROPERTY

4.1 Restrictions on Development and Use. Each and every Owner and Occupant shall restrict the use of the Property as follows:

a. The Property shall be restricted to commercial or industrial uses.

b. Residential development for human habitation shall not be permitted on the Property; provided, however, that no more than one (1) residential dwelling unit ancillary to the primary use of the Property may be constructed and inhabited at the Property, so long as (i) such unit is located above ground level, and (ii) the Owner or Occupant constructing such unit utilizes commercially reasonable construction techniques (such as vapor barriers) to minimize the potential for contact between individuals residing in such unit and hazardous materials that may be present in the soil or groundwater of the Property.

c. Hospitals or health clinics for humans shall not be constructed on the Property.

d. Day-care centers for either children or senior citizens shall not be permitted on the Property.

e. Schools for children under 21 years of age shall not be permitted on the Property.

f. No drilling for drinking water, oil, or gas shall be permitted on the Property.

g. No extraction (except for necessary construction site dewatering), utilization or consumption of water from groundwater beneath the Property.

h. No disposal of extracted groundwater from construction site dewatering into the waters of the State except in compliance with the requirements of the Board.

i. No activities (e.g., excavation, grading, removal, trenching, filling, earth movement, or mining) that will disturb the soil beneath the Property shall be permitted on the

Property without a Soil Management Plan and a Health and Safety Plan submitted to the Board for review and approval.

j. Any soils brought to the surface by grading, excavating, trenching or backfilling shall be managed in accordance with applicable provisions of state and federal law.

k. The Owner(s)/Occupant(s) shall notify the Declarant the Department of Toxic Substance (the "Department") and the Board of each of the following: (i) excavation, trenching or digging of soil below 2.5 feet in depth; and (ii) extraction of groundwater for any purpose. Notification to the Declarant shall be made by registered or certified mail ten (10) working days prior to excavation, trenching or digging of soil or extraction of groundwater for any purpose. Timely and accurate notification by any Owner or Occupant shall satisfy this requirement on behalf of all other Owners and Occupants.

l. The Owner(s)/Occupant(s) shall allow the Declarant, its successors or assigns, and the Department access to the Property for inspection, surveillance, monitoring, maintenance, and other activities consistent with the purposes of this Covenant as deemed necessary by the Declarant or the Department.

4.2 Conveyance of Property. The Owner(s) shall provide a notice to the Declarant not later than thirty (30) days after any sale, lease or other conveyance of the Property or a real property estate in the Property. The Declarant shall not, by these provisions, have authority to approve, disapprove, or otherwise affect any such sale, lease, or other conveyance of the Property or estate except as otherwise provided by law, by administrative order, or by reason of this Covenant.

4.3 Enforcement. Failure of the Owner(s)/Occupant(s) to comply with any of the requirements of this Covenant shall be grounds for the Declarant to require that the Owner(s)/Occupant(s) modify or remove any Improvements constructed in violation of the Covenant.

ARTICLE V.
VARIANCE AND TERMINATION

5.1 Variance. This Covenant may be modified only by a written instrument executed by Declarant and by the then current Owner(s), which instrument shall be recorded in the official records of the County of Santa Clara ("Official Records").

5.2 Term. Unless terminated by law or by the Declarant in the exercise of its discretion, this Covenant shall continue in effect in perpetuity.

ARTICLE VI.
MISCELLANEOUS

6.1 No Dedication Intended. Nothing set forth herein shall be construed to be a gift or dedication, or offer of a gift or dedication, of the Property or any portion thereof to the general public or anyone else for any purpose whatsoever.

6.2 Notices. Whenever any person gives or serves any notice, demand, or other communication with respect to this Covenant, each such notice, demand, or other communication shall be in writing and shall be deemed effective (i) when delivered, if personally delivered to the person being served or to an officer of a corporate party being served or official of a government agency being served, or, (ii) three (3) business days after deposit in the mail if mailed by United States mail, postage paid and certified, return receipt requested:

To: "Declarant": Department of Global Real Estate, M/S 68
Advanced Micro Devices, Inc.
One AMD Place
PO Box 3453
Sunnyvale, CA 94088

With a carbon copy to:

General Counsel
M/S 562
5204 E. Ben White Blvd.
Austin, TX 78741

If To "Board": California Regional Water Quality Control Board, San Francisco Bay Region
1515 Clay Street
Suite 1400
Oakland, CA 94612

6.3 Partial Invalidity. If any portion of the Restrictions or terms set forth herein is determined to be invalid for any reason, the remaining portion shall remain in full force and effect as if such portion had not been included herein.

6.4 Article Headings. Headings at the beginning of each numbered article of this Covenant are solely for the convenience of the parties and are not a part of the Covenant.

6.5 Recordation. This instrument shall be executed by Declarant, acknowledged by SCS and recorded in the Official Records.

IN WITNESS WHEREOF, the parties execute this Covenant as of the date set forth above.

DECLARANT

By: _____
Robert J. Rivet

Title: Executive Vice President and Chief Financial Officer

Date: 4/28/05

Acknowledged by:

SUNNYVALE COMMUNITY SERVICES

By: _____

Title: _____

Date: _____

6.3 Partial Invalidity. If any portion of the Restrictions or terms set forth herein is determined to be invalid for any reason, the remaining portion shall remain in full force and effect as if such portion had not been included herein.

6.4 Article Headings. Headings at the beginning of each numbered article of this Covenant are solely for the convenience of the parties and are not a part of the Covenant.

6.5 Recordation. This instrument shall be executed by Declarant, acknowledged by SCS and recorded in the Official Records.

IN WITNESS WHEREOF, the parties execute this Covenant as of the date set forth above.

DECLARANT

By: _____

Title: _____

Date: _____

Acknowledged by:

SUNNYVALE COMMUNITY SERVICES

By: _____
Nancy S. Tivol

Title: Executive Director

Date: 4/28/05

NOTARY ACKNOWLEDGMENT

STATE OF California }ss
COUNTY OF Santa Clara }

On **April 28, 2005**, before me, **Dian L. Blair**, a Notary Public in and for said State, personally appeared **Nancy S. Tivol**, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature 

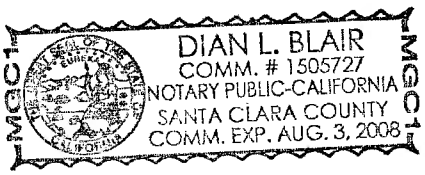


Exhibit A

Legal Description:

Real Property in the City of Sunnyvale, County of Santa Clara, State of California, described as follows:

PARCEL ONE:

Parcel "A", as shown on that certain Map entitled, "Parcel Map being a merger of all of Parcel "A" of Parcel Map recorded in Book 325, Maps, at page 40 and all of Parcel "A" of parcel Map recorded in Book 231, Maps, at page 55, Santa Clara County Recorder," which Map was filed for record in the office of the Recorder of the County of Santa Clara, State of California on February 27, 1987, in Book 571 of Maps page(s) 35.

PARCEL TWO:

Easement for ingress and egress over the South 310.60 feet of the East 13 feet of Parcel 4 of Parcel Map recorded in Book 248 of Maps, page 51, as granted in the Deed to Mini-land Inc., a California corporation recorded August 25, 1969 in Book 8648, page 731.

APN: 205-24-013

ARB: 206-61-049,050,051

STATE OF CALIFORNIA)

)

COUNTY OF Santa Clara)

On 4/28/05, before me, Peg A. O'Malley, a Notary Public in and for State of California, personally appeared Robert J. Rivet, personally known to me ~~or proved to me on the basis of satisfactory evidence~~ to be the person whose name is subscribed to the within instrument and acknowledged to me that he/~~she~~ executed the same in his/~~her~~ authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Peg A. O'Malley

Notary's Signature

PEG A. O'MALLEY
Commission # 1527589
Notary Public - California
Santa Clara County
My Comm. Expires Nov 16, 2008

DOCUMENT: 22137440

Pages: 12

Fees.... 63.00
Taxes...
Copies..
AMT PAID 63.00

REGINA ALCOMENDRAS
SANTA CLARA COUNTY RECORDER
Recorded at the request of
Grantee

RDE # 010
3/19/2013
10:23 AM

Recording Requested by:
TWC Storage, LLC
1100 ONEOK Plaza
100 West Fifth Street
Tulsa, Oklahoma, 741-4217

When Recorded Mail to:
Bruce H. Wolfe
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

CALIFORNIA REGIONAL WATER
MAY 09 2013
QUALITY CONTROL BOARD

With a Copy to Department of Global Real Estate, M/S 68
Advanced Micro Devices, Inc.
P.O. Box 3453
Sunnyvale, California 94088

COVENANT AND ENVIRONMENTAL RESTRICTION ON PROPERTY

1165 East Arques Avenue, Sunnyvale, Santa Clara County, California

This Covenant and Environmental Restriction on Property ("Covenant") is made effective as of the 13th day of March 2013, by TWC Storage, LLC and its successors and assigns, if any ("Covenantor"), who is the Owner of record of that certain property situated at 1165 East Argues Avenue, in the City of Sunnyvale, County of Santa Clara, State of California, which is more particularly described in Exhibit "A", attached hereto and incorporated herein by this reference (such portion hereinafter referred to as the "Burdened Property"), for the benefit of the California Regional Water Quality Control Board, San Francisco Bay Region (the "Water Board"), with reference to the following facts:

RECITALS

A. The Burdened Property and groundwater underlying the property contain hazardous materials.

B. The Water Board has determined that this Covenant is reasonably necessary to protect present or future public health and safety, or the environment, as a result of the presence on the Burdened Property of hazardous materials as defined in California Health and Safety Code section 25260. As a result of such determination, the Burdened Property has been subjected to certain restrictions pursuant to Order No. 91-139, adopted September 18, 1991, by the Water Board. The Covenantor and the Water Board hereby agree, pursuant to Civil Code section 1471 and Health Code section 25355.5, that the use of the Property be restricted as set forth in this Covenant.

C. Contamination of the Burdened Property. In Water Board Order No. 91-139, the Water Board found that soil at the Burdened Property was contaminated by releases of volatile organic chemicals from semiconductor manufacturing operations conducted by Monolithic Memories, Inc., a predecessor of Advanced Micro Devices, Inc. ("AMD"), at 1165 East Arques Avenue, and by operations of former National Semiconductor Corporation (currently Texas Instruments) and United Technologies Corporation at facilities hydrogeologically upgradient of the Burdened Property. The Water Board found that such operations resulted in contamination of

soil and groundwater with organic chemicals including tetrachloroethylene, trichloroethylene, 1,2-dichloroethylene, xylenes, chlorobenzene, phenols, and polynuclear aromatic compounds, including benzo (a) anthracene, benzo (b) flouranthene, benzo (a) pyrene, benzo (k) flouranthene, indeno (1,2,3-cd) pyrene, dibenz (a,h) anthracene, naphthalene and pyrene, all of which constitute hazardous materials as that term is defined in Health and Safety Code Section 25260.

In July 2005, TWC Storage, LLC, the current owner of the Site, initiated emergency spill control measures following a release of PCE from an onsite transformer. During the initial response to the transformer PCE release, soil excavations were conducted to remove PCE-affected soil. Subsequently, TWC performed in-situ chemical oxidation and bioremediation to aid in the remediation of PCE-affected groundwater. A dual-phase groundwater and soil vapor extraction and treatment system (DPE) operated at the Site in 2008 to treat the remaining affected soil and groundwater at the Site. The Regional Water Board approved shutdown of the DPE system after it was demonstrated that the soil cleanup objective for PCE had been achieved. Injections of a biological dechlorination enhancing agent followed the DPE system to further remediate dissolved PCE concentrations in groundwater.

D. Exposure Pathways. The contaminants addressed in this Covenant are present in soil and groundwater on the Burdened Property. Without the mitigation measures that have been performed on the Burdened Property, exposure to these contaminants could take place via in-place contact, ingestion of groundwater, or intrusion of vapors into indoor air and inhalation. The risk of public exposure to the contaminants has been substantially lessened by the remediation and controls described herein.

E. Adjacent Land Uses and Population Potentially Affected. The Burdened Property is currently vacant. Covenantor is in contract to sell the Burdened Property for the development and construction of a commercial fitness complex. The parcels adjacent to, and contiguous with, the Burdened Property have, to the best of Covenantor's knowledge as of the date of this Covenant, the following uses: 1) The parcel to the east contains an office building(s) that is occupied and used by a physician(s) for that individual(s) medical practice; 2) the parcels to the north contains office buildings occupied by a not for profit, and an industrial supply company; and 3) the parcel to the west contains an office building(s) that is occupied by a child care facility.

F. Full and voluntary disclosure to the Water Board of the presence of hazardous materials on the Burdened Property has been made and extensive sampling, investigation and remediation of the Burdened Property has been conducted.

G. Covenantor now desires to impose certain additional restrictions on the use of the Burdened Property, which restrictions are reasonably necessary to protect present or future human health or safety or the environment as a result of the presence on the Burdened Property of hazardous materials, as defined in Section 25260 of the California Health and Safety Code, and it is the intent of Covenantor that it, and all owners and occupants of the Burdened Property, shall be subject to, and bound to comply with, the restrictions set forth herein.

H. Covenantor desires and intends that in order to benefit the Water Board, and to protect the present and future public health and safety, the Burdened Property shall be used in such a manner as to avoid potential harm to persons or property that may result from hazardous materials that may have been deposited on portions of the Burdened Property.

I. The provisions of this Covenant shall also be for the benefit of, and shall be enforceable by, the United States Environmental Protection Agency ("U.S. EPA"), as a third

party beneficiary pursuant to general contract law, including, but not limited to, Civil Code Section 1559.

ARTICLE I
GENERAL PROVISIONS

1.1 Provisions to Run with the Land. This Covenant sets forth protective provisions, covenants, conditions and restrictions (collectively referred to as "Restrictions"), subject to which the Burdened Property and every portion thereof shall be improved, held, used, occupied, leased, sold, hypothecated, encumbered and/or conveyed. The restrictions set forth in Article III are reasonably necessary to protect present and future human health and safety or the environment as a result of the presence on the land of hazardous materials. Each and all of the Restrictions shall run with the land, and pass with each and every portion of the Burdened Property, and shall apply to, inure to the benefit of, and bind the respective successors in interest thereof, for the benefit of the Water Board and all Owners and Occupants. Each and all of the Restrictions are imposed upon the entire Burdened Property unless expressly stated as applicable to a specific portion of the Burdened Property. Each and all of the Restrictions run with the land pursuant to section 1471 of the Civil Code. Each and all of the Restrictions are enforceable by the Water Board, and the U.S. EPA as third party beneficiary.

1.2 Binding Upon Owners/Occupants Presumed. All purchasers, lessees, or possessors of any portion of the Burdened Property shall be deemed by their purchase, leasing, or possession of such Burdened Property, to be in accord with the foregoing and to agree for and among themselves, their heirs, successors, and assignees, and the agents, employees, and lessees of such owners, heirs, successors, and assignees, that the Restrictions as herein established must be adhered to for the benefit of the Water Board and the Owners and Occupants of the Burdened Property and that the interest of the Owners and Occupants of the Burdened Property shall be subject to the Restrictions contained herein. For the purpose of Health and Safety Code section 25355.5(a)(1)(C), and with regard to the Water Board, the Water Board intends this Covenant to bind all Owners and Occupants. Pursuant to Civil Code section 1471(b), all Owners of the Burdened Property are expressly bound hereby for the benefit of Covenantor, the Water Board, and the U.S. EPA.

1.3 Incorporation into Deeds and Leases. Covenantor desires and covenants that the Restrictions set out herein shall be incorporated by reference in each and all deeds and leases of any portion of the Burdened Property. Recordation of this Covenant shall be deemed binding on all successors, assigns, and lessees, regardless of whether a copy of this Covenant has been attached to or incorporated into any given deed or lease.

1.4 Written Notice of Release of Hazardous Substances. Prior to the sale, lease or sublease of the Burdened Property, the Owner or Occupant shall give the buyer, lessee, or sublessee notice that hazardous substances are located on or beneath the Burdened Property, as required by Health and Safety Code section 25359.7.

1.5 Purpose. It is the purpose of this instrument to establish a covenant, which will run with the land, that facilitates the remediation of past environmental contamination and protects human health and the environment by reducing the risk of exposure to residual hazardous materials.

ARTICLE II
DEFINITIONS

2.1 Improvements. "Improvements" means all buildings, roads, driveways, regrading, and paved parking areas, constructed or placed upon any portion of the Burdened Property.

2.2 Occupant. "Occupant" means any Owner and any person or entity entitled by ownership, leasehold, or other legal relationship to occupy any portion of the Burdened Property.

2.3 Owner(s). "Owner(s)" means Covenantor and any and all successors in interest to Covenantor, including without limitation all donees and purchasers of Covenantor's interest in the Burdened Property, and their respective successors in interest, including heirs and assigns, who at any time hold fee title to all or any portion of the Burdened Property.

2.4 U.S. EPA. "U.S. EPA" shall mean the United Environmental Protection Agency and includes its successor agencies, if any.

2.5 Water Board. "Water Board" shall mean the California Regional Water Quality Control Board for the San Francisco Bay Region and shall include its successor agencies, if any.

ARTICLE III
DEVELOPMENT, USE, AND CONVEYANCE OF THE PROPERTY

3.1 Restrictions on Development and Use. Each and every Owner and Occupant shall restrict the use of the Burdened Property as follows:

a. The Burdened Property shall be restricted to commercial or industrial uses.

b. Residential development for human habitation shall not be permitted on the Burdened Property.

c. Hospitals or health clinics for humans shall not be constructed on the Burdened Property.

d. Day-care centers for either children or senior citizens shall not be permitted on the Burdened Property. This use limitation specifically contemplates, and is limited to facilities that provide care for children or senior citizens, as their primary business, and where the children and/or senior citizens are present at the facility more than an average of six hours per day, five days per week. If deemed necessary by the Site Management Plan, the buildings for said uses shall be constructed such that (i) any portion of the building wherein such care is being provided is located above ground level, and (ii) the building, or portion of the building wherein such care will be provided is constructed utilizing commercially reasonable construction techniques (such as vapor barriers, sub-slab ventilation system, and HVAC system) to minimize the potential for contact between individuals and hazardous materials that may be present beneath a building on the Burdened Property.

e. Schools for children under 21 years of age shall not be permitted on the Burdened Property.

f. No extraction (except for necessary construction site dewatering), utilization or consumption of water from groundwater beneath the Burdened Property.

g. No disposal of extracted groundwater from construction site dewatering into the waters of the State except in compliance with the requirements of the Water Board.

h. All uses and development of the Burdened Property shall be consistent with any applicable Water Board Order, the Site Management Plan, and this Covenant, each of which is hereby incorporated by reference including future amendments thereto. All uses and development shall preserve the integrity of any remedial measures taken or remedial equipment installed, and any groundwater monitoring system installed on the Burdened Property pursuant to the requirements of the Water Board Order.

i. No Owners or Occupants of the Property or any portion thereof shall drill, bore, otherwise construct, or use a well for the purpose of extracting water for any use, including but not limited to, domestic, potable, or industrial uses, unless expressly permitted in writing by the Water Board.

j. Any soils brought to the surface by grading, excavating, trenching or backfilling shall be managed in accordance with the Site Management Plan, and applicable provisions of state and federal law.

k. The Owner(s)/Occupant(s) shall notify AMD and the Water Board of each of the following: (i) excavation, trenching or digging of soil below 2.5 feet in depth; and (ii) extraction of groundwater for any purpose. Notification to AMD shall be made by registered or certified mail ten (10) working days prior to excavation, trenching or digging of soil or extraction of groundwater for any purpose. Timely and accurate notification by any Owner or Occupant shall satisfy this requirement on behalf of all other Owners and Occupants.

l. The Owner(s)/Occupant(s) shall allow AMD, its successors or assigns, and the Water Board, and/or any persons acting pursuant to Water Board Orders access to the Burdened Property for inspection, surveillance, monitoring, maintenance, and other activities consistent with the purposes of this Covenant, as deemed necessary by AMD and the Water Board, as provided for in Division 7 of the Water Code.

m. No Owner or Occupant of the Burdened Property shall act in any manner that will aggravate or contribute to the existing environmental conditions of the Burdened Property. All use and development of the Burdened Property shall preserve the integrity of any remedial measures.

3.2 Conveyance of Property. The Owner(s) shall provide a Notice to AMD not later than thirty (30) days after any sale, lease or other conveyance of the Burdened Property, or a real property estate in the Burdened Property. AMD shall not, by these provisions, have authority to approve, disapprove, or otherwise affect any such sale, lease, or other conveyance of the Burdened Property or estate, except as otherwise provided by law, by administrative order, or by reason of this Covenant.

3.3 Enforcement. Failure of an Owner or Occupant to comply with any of the restrictions, as set forth in paragraph 3.1, shall be grounds for the Water Board, or the U.S. EPA, by reason of this Covenant, to have the authority to require that the Owner modify or remove any Improvements constructed in violation of that paragraph. Violation of the Covenant shall be

grounds for the Water Board, or the U.S. EPA, to file civil actions against the Owner as provided by law.

3.4 Enforcement Rights of the U.S. EPA as Third Party Beneficiary. U.S. EPA, as a third party beneficiary, has the right to enforce the Restrictions on Development and Use contained herein.

3.5 Notice in Agreements. After the date of recordation hereof, all Owners and Occupants shall execute a written instrument which shall accompany all purchase agreements or leases relating to the Burdened Property. Any such instrument shall contain the following statement:

> The land described herein contains hazardous materials in soil and in the groundwater under the property, and is subject to a deed restriction dated as of March 13, 2013, and recorded on March 19, 2013, in the Official Records of Santa Clara County, California, as Document No. 22137440 which Covenant and Restriction imposes certain covenants, conditions, and restrictions on usage of the property described herein. This statement is not a declaration that a hazard exists.

ARTICLE IV
VARIANCE AND TERMINATION

4.1 Variance. Any Owner or, with the Owner's consent, any Occupant of the Burdened Property or any portion thereof may apply to the Water Board for a written variance from the provisions of this Covenant.

4.2 Termination. Any Owner or, with the Owner's consent, any Occupant of the Burdened Property or a portion thereof may apply to the Water Board for a termination of the Restrictions as they apply to all or any portion of the Burdened Property.

4.3 Term. Unless terminated by law or in accordance with paragraph 4.2, this Covenant shall continue in effect in perpetuity.

ARTICLE V
MISCELLANEOUS

5.1 No Dedication Intended. Nothing set forth herein shall be construed to be a gift or dedication, or offer of a gift or dedication, of the Burdened Property or any portion thereof to the general public or anyone else for any purpose whatsoever.

5.2 Notices. Whenever any person gives or serves any notice, demand, or other communication with respect to this Covenant, each such notice, demand, or other communication shall be in writing and shall be deemed effective (i) when delivered, if personally delivered to the person being served or to an officer of a corporate party being served or official of a government agency being served, or, (ii) three (3) business days after deposit in the mail if mailed by United States mail, postage paid and certified, return receipt requested:

To: Covenantor
TWC Storage, LLC
1100 ONEOK Plaza
100 West Fifth Street
Tulsa, OK 74103-4217

With a carbon copy to: Counsel
Jeff Lawson, Attorney at Law
Silicon Valley Law Group
25 Metro Drive, 6th Floor
San Jose, CA 95110

To: AMD
Department of Global Real Estate, MIS 68
Advanced Micro Devices, Inc.
One AMD Place
PO Box 3453
Sunnyvale, CA 94088

With a carbon copy to: General Counsel
7171 Southwest Parkway
M/S B I 00.T.432
Austin, TX 78735

To: Water Board
California Regional Water Quality Control Board, San Francisco Bay Region
Attention: Max Shahbazian
1515 Clay Street, Suite 1400
Oakland, CA 94612

And

U.S. Environmental Protection Agency
Region IX
75 Hawthorne Street
Attn: Monolithic Memories, (Advanced Micro Devices, AMD-Arques) Site Project Manager

5.3 Partial Invalidity. If any portion of the Restrictions or terms set forth herein is determined to be invalid for any reason, the remaining portion shall remain in full force and effect as if such portion had not been included herein.

5.4 Article Headings. Headings at the beginning of each numbered article of this Covenant are solely for the convenience of the parties and are not a part of the Covenant.

5.5 Recordation. This instrument shall be executed by Covenantor, acknowledged by AMD and recorded in the Official Records.

5.6. References. All references to Code sections include successor provisions.

5.7 Construction. Any general rule of construction to the contrary notwithstanding, this instrument shall be liberally construed in favor of the Covenant, to effect the purpose of this instrument and the policy and purpose of the Water Code. If any provision of this instrument is found to be ambiguous, an interpretation consistent with the purpose of this instrument that would render the provision valid shall be favored over any interpretation that would render it invalid.

This Covenant wholly supersedes that Certain Covenant to Restrict Use of Property (Environmental Restrictions) dated effective as of April 29, 2005, and recorded on July 24, 2008, in the Official Records of Santa Clara County, California as Document No. 19933753 ("Prior Covenant") made by TWC Storage, LLC as "Declarant" and acknowledged by the Water Board, AMD and Sunnyvale Community Services, a California non-profit corporation ("SCS").

IN WITNESS WHEREOF, the parties execute this Covenant as of the date set forth above.

TWC Storage, LLC

By: _____

Title: VP - Manager James M. Sturdivant

Date: March 7, 2013

Acknowledged by:

STATE OF CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, SAN FRANCISCO BAY REGION

By: _____

Title: Executive Officer Bruce H. Wolfe

Date: March 13, 2013

STATE OF ~~CALIFORNIA~~ OKLAHOMA)
)
COUNTY OF Tulsa)

On March 7, 2013, before me, Cynthia L. Squier, Notary Public
Date Here ~~Insert~~ Name and Title of the Notary

personally appeared James M. Sturdivant
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(~~ies~~), and that by his/~~her/their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of ~~California~~ Oklahoma that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Cynthia L. Squier
Signature of Notary Public

Place Notary Seal Above

ACKNOWLEDGMENT

State of California)
County of ALAMEDA)

On MARCH 13, 2013, before me, JOHN TIMOTHY
(insert name of notary)
Notary Public, personally appeared BRUCE H. WOLFE,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

JOHN TIMOTHY
Commission # 1983992
Notary Public - California
Alameda County
My Comm. Expires Jul 1, 2016

Signature _____ (Seal)

ACKNOWLEDGMENT

State of California)
County of _____)

On _____, before me, _____,
(insert name of notary)
Notary Public, personally appeared _____,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____ (Seal)

Exhibit A

Legal Description:

Real Property in the City of Sunnyvale, County of Santa Clara, State of California, described as follows:

PARCEL ONE:

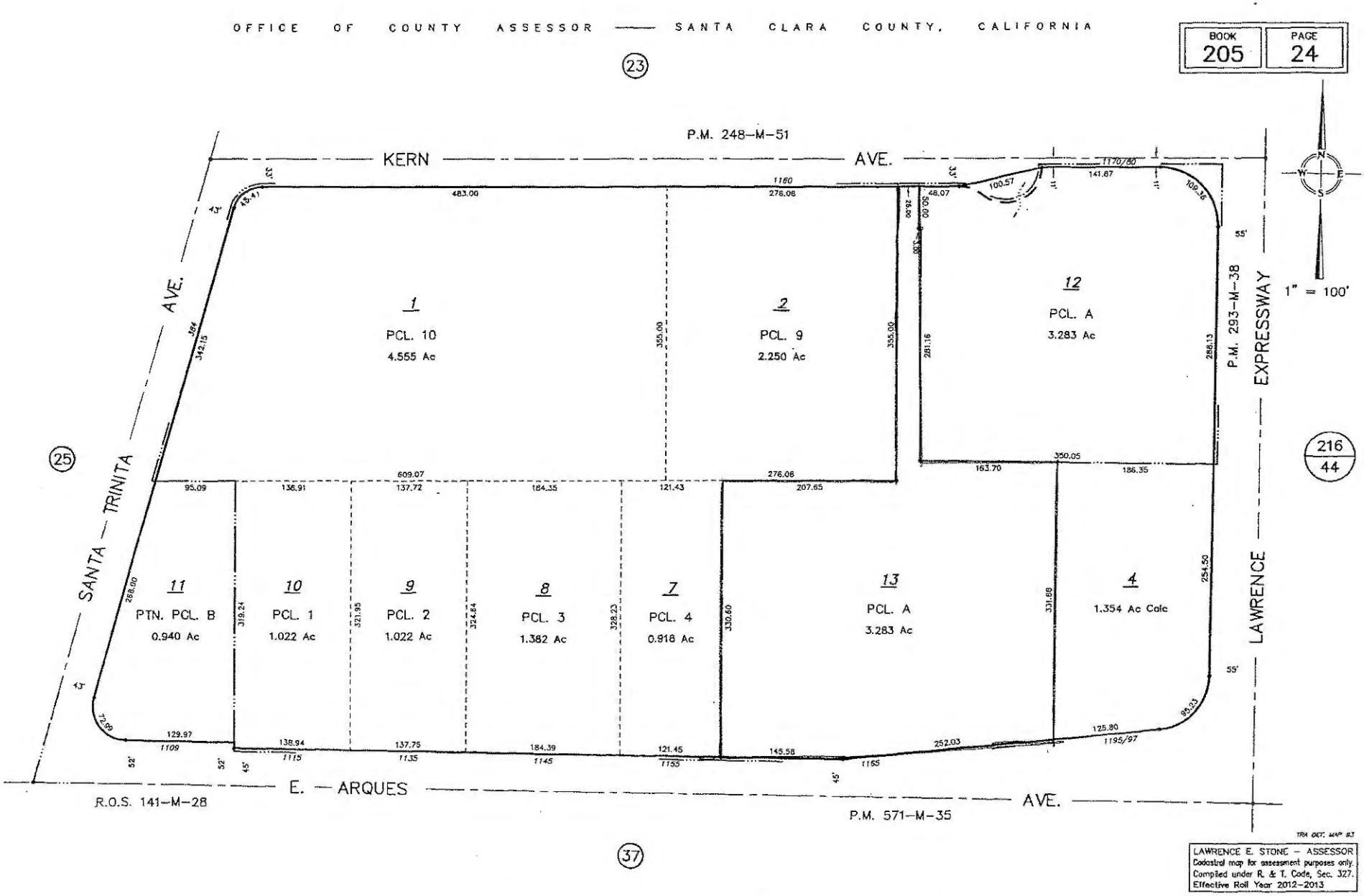
Parcel "A", as shown on that certain Map entitled, "Parcel Map being a merger of all of Parcel "A" of Parcel Map recorded in Book 325, Maps, at page 40 and all of Parcel "A" of parcel Map recorded in Book 231, Maps, at page 55, Santa Clara County Recorder," which Map was filed for record in the office of the Recorder of the County of Santa Clara, State of California on February 27, 1987, in Book 571 of Maps page(s) 35.

PARCEL TWO:

Easement for ingress and egress over the South 310.60 feet of the East 13 feet of Parcel 4 of Parcel Map recorded in Book 248 of Maps, page 51, as granted in the Deed to Mini-land Inc., a California corporation recorded August 25, 1969 in Book 8648, page 731.

APN: 205-24-013

ARB: 206-61-049,050,051


OFFICE OF COUNTY ASSESSOR — SANTA CLARA COUNTY, CALIFORNIA
BOOK 205
PAGE 24
23
P.M. 248–M–51
KERN AVE.
1" = 100'
1
PCL. 10
4.555 Ac
2
PCL. 9
2.250 Ac
12
PCL. A
3.283 Ac
P.M. 293–M–38
EXPRESSWAY
LAWRENCE
SANTA – TRINITA AVE.
25
216
44
11
PTN. PCL. B
0.940 Ac
10
PCL. 1
1.022 Ac
9
PCL. 2
1.022 Ac
8
PCL. 3
1.382 Ac
7
PCL. 4
0.918 Ac
13
PCL. A
3.283 Ac
4
1.354 Ac Calc
E. – ARQUES AVE.
R.O.S. 141–M–28
P.M. 571–M–35
37
LAWRENCE E. STONE – ASSESSOR
Cadastral map for assessment purposes only.
Compiled under R. & T. Code, Sec. 327.
Effective Roll Year 2012–2013

1160 Kern Avenue
1160 Kern Avenue
Sunnyvale, CA 94085

Inquiry Number: 3810866.1
December 16, 2013

EDR Environmental Lien and AUL Search

Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Environmental Lien and AUL Search

The EDR Environmental Lien and AUL Search Report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied address information to:

- search for parcel information and/or legal description;
- search for ownership information;
- research official land title documents recorded at jurisdictional agencies such as recorders' offices, registries of deeds, county clerks' offices, etc.;
- access a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument(s) (title, parties involved, and description); and
- provide a copy of the deed or cite documents reviewed.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EDR Environmental Lien and AUL Search

TARGET PROPERTY INFORMATION

ADDRESS

1160 Kern Avenue
1160 Kern Avenue
Sunnyvale, CA 94085

RESEARCH SOURCE

Source 1:

Santa Clara Recorder
Santa Clara, CA

PROPERTY INFORMATION

Deed 1:

Type of Deed:	deed
Title is vested in:	The Resource Area for Teachers Corp
Title received from:	Sobrato Interests II LP
Deed Dated	2/7/2007
Deed Recorded:	2/12/2007
Book:	NA
Page:	na
Volume:	na
Instrument:	na
Docket:	NA
Land Record Comments:	
Miscellaneous Comments:	
Legal Description:	See Exhibit
Legal Current Owner:	The Resource Area for Teachers Corp
Parcel # / Property Identifier:	205-24-002
Comments:	See Exhibit

ENVIRONMENTAL LIEN

Environmental Lien: Found ☐ Not Found ☒

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

AULs: Found ☐ Not Found ☒

Deed Exhibit 1

DOCUMENT: 19300221

Pages: 3

Fees 13 00
Taxes .
Copies .
AMT PAID 13.00

REGINA ALCOMENDRAS
SANTA CLARA COUNTY RECORDER
Recorded at the request of
First American Title Company

RDE # 014
2/12/2007
8:00 AM

RECORDING REQUESTED BY

First American Title Insurance Company
National Commercial Services
NCS 276466 SC

AND WHEN RECORDED MAIL TO:

The Resource Area For Teachers
1355 Ridder Park Drive
San Jose, California 95131
Attention: Mary Simon

Space Above This Line for Recorder's Use Only

A.P.N.: 205-24-002

File No.: NCS-276466-SC

GRANT DEED

The Undersigned Grantor(s) Declare(s): DOCUMENTARY TRANSFER TAX **$Exempt**; CITY TRANSFER TAX **$Exempt**; SURVEY MONUMENT FEE $
[xx] Transfer is a bona fide gift exempt from tax pursuant to California Revenue and Taxation Code Section 11930

John Michael Sobrato
Signature of Declarant

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, **Sobrato Interests II, a California limited partnership**

hereby GRANTS to **THE RESOURCE AREA FOR TEACHERS, a California nonprofit public benefit corporation**

the following described property in the City of **Sunnyvale**, County of **Santa Clara**, State of **California**:

See Exhibit A attached hereto and made a part hereof

The foregoing grant is made subject to non-delinquent real property taxes and assessments and all matters of record.

Dated: FEBRUARY 7, 2007	**SOBRATO INTERESTS II, a California limited partnership** **By: The Sobrato 1979 Revocable Trust, As Amended, Its General Partner** **By:** _____ **John Michael Sobrato, Trustee**

Mail Tax Statements To: SAME AS ABOVE

EXHIBIT A
LEGAL DESCRIPTION

Real property in the City of Sunnyvale, County of Santa Clara, State of California, described as follows:

PARCEL 9, AS SHOWN ON THAT PARCEL MAP FILED FOR RECORD IN THE OFFICE OF THE RECORDER OF THE COUNTY OF SANTA CLARA STATE OF CALIFORNIA ON FEBRUARY 14, 1969, IN BOOK 248 OF MAPS

APN: 205-24-002

STATE OF CALIFORNIA)SS

COUNTY OF SANTA CLARA)

On 2-7-2007, before me, B MAZZONE, Notary Public, personally appeared JOHN MICHAEL SOBRATO, personally known to me ~~(or proved to me on the basis of satisfactory evidence)~~ to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/~~she~~/they executed the same in his/~~her~~/their authorized capacity(ies) and that by his/~~her~~/~~their~~ signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

B. MAZZONE
Commission # 1509091
Notary Public - California
Santa Clara County
My Comm. Expires Aug 21, 2008

Signature

My Commission Expires: 8-21-2008

This area for official notarial seal

Notary Name: B. MAZZONE

Notary Phone: 408-446-0700

Notary Registration Number: 1509091

County of Principal Place of Business: SANTA CLARA

B. MAZZONE
Commission # 1509091
Notary Public - California
Santa Clara County
My Comm. Expires Aug 21, 2008

APPENDIX B

Historical Groundwater Monitoring Results

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
ME07B1	1/16/1992	<2.5[1]	**260[2]**	<2.5
ME07B1	4/23/1992	<6.7	**260**	**340**
ME07B1	7/17/1992	<5	**280**	**360**
ME07B1	10/23/1992	<4	**230**	**260**
ME07B1	1/27/1993	<100	**230**	<100
ME07B1	4/12/1993	<4	**230**	**280**
ME07B1	7/12/1993	<4	**260**	**340**
ME07B1	10/11/1993	<2	**200**	**360**
ME07B1	1/11/1994	<5	**200**	**270**
ME07B1	4/11/1994	<0.5	**180**	**280**
ME07B1	7/15/1994	<2.9	**220**	**280**
ME07B1	10/13/1994	<3.3	**210**	**260**
ME07B1	1/11/1995	<2.5	**150**	**180**
ME07B1	4/10/1995	<10	<10	**220**
ME07B1	7/11/1995	<3	**190**	**230**
ME07B1	10/9/1995	<2.9	**190**	**250**
ME07B1	1/15/1996	<2.5	**110**	**180**
ME07B1	4/15/1996	<5	**180**	**260**
ME07B1	7/15/1996	<3.3	**190**	**260**
ME07B1	10/14/1996	<2.9	**180**	**250**
ME07B1	1/13/1997	<5	**170**	**220**
ME07B1	10/27/1997	<5	**150**	**220**
ME07B1	10/15/1999	<5	**150**	**160**
ME07B1	10/11/2000	<0.5	**150**	**150**
ME07B1	10/30/2002	<5	**140**	**110**
ME07B1	11/5/2003	<5	**110**	**120**
ME07B1	10/12/2004	<0.5	**100**	**92**
ME07B1	10/9/2008	<0.5	**50**	**16**
ME07B1	10/16/2009	<0.5	**38**	**15**
ME07B1	10/14/2010	<0.5	**45**	**15**
ME07B1	10/12/2011	<0.5	**40**	**15**
ME07B1	10/11/2012	<0.5	**36**	**14**
ME07B1	10/17/2013	<0.5	**57**	**22**
ME19B2	1/16/1992	<2.5	**390**	<2.5
ME19B2	4/23/1992	<3.3	**270**	**190**
ME19B2	7/17/1992	<4	**300**	**190**
ME19B2	10/23/1992	<4	**230**	**150**
ME19B2	1/27/1993	<50	**180**	<50
ME19B2	4/12/1993	<3.34	**210**	**150**
ME19B2	7/12/1993	<2.6	**240**	**150**

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
ME19B2	10/11/1993	<2	**210**	**220**
ME19B2	1/11/1994	<5	**200**	**120**
ME19B2	4/11/1994	<5	**180**	**140**
ME19B2	7/15/1994	<2.2	**210**	**130**
ME19B2	10/13/1994	<2.9	**190**	**150**
ME19B2	1/11/1995	<2.5	**190**	**130**
ME19B2	4/10/1995	<10	**180**	**210**
ME19B2	7/10/1995	<2	**160**	**110**
ME19B2	10/9/1995	<2.9	**210**	**150**
ME19B2	1/15/1996	<2.5	**95**	**95**
ME19B2	4/15/1996	<2.5	**140**	**110**
ME19B2	7/15/1996	<2	**150**	**120**
ME19B2	10/14/1996	<2	**150**	**110**
ME19B2	1/13/1997	<2.5	**140**	**100**
ME19B2	10/29/1997	<5	**130**	**99**
ME19B2	10/23/1998	<2.5	**91**	**64**
ME19B2	10/15/1999	<5	**120**	**90**
ME19B2	10/11/2000	<0.5	**110**	**69**
ME19B2	11/1/2002	<2.5	**120**	**72**
ME19B2	11/5/2003	<0.5	**82**	**60**
ME19B2	10/12/2004	<0.5	**71**	**76**
ME19B2	10/10/2007	<0.5	**24**	**5.6**
ME19B2	10/8/2008	<0.5	**18**	**5**
ME19B2	10/13/2010	<0.5	**4.5**	**2.4**
ME19B2	10/11/2011	<0.5	**2.4**	**0.92**
ME19B2	10/9/2012	<0.5	**1.9**	**0.9**
ME19B2	10/15/2013	<0.5	**1.4**	**0.9**
ME20B2	1/16/1992	<2.5	**240**	<2.5
ME20B2	4/23/1992	<2.5	**190**	**100**
ME20B2	7/17/1992	<2	**170**	**100**
ME20B2	10/23/1992	<2	**160**	**89**
ME20B2	1/27/1993	<50	**86**	**79**
ME20B2	4/12/1993	<2.2	**170**	**110**
ME20B2	7/12/1993	<2	**150**	**82**
ME20B2	10/11/1993	<2	**160**	**130**
ME20B2	1/11/1994	<0.5	**80**	**150**
ME20B2	4/11/1994	<1.3	<1.3	**72**
ME20B2	7/15/1994	<2	**120**	**74**
ME20B2	10/13/1994	<2	**120**	**66**
ME20B2	1/11/1995	<1.3	**110**	**65**

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
ME20B2	4/10/1995	<0.5	<0.5	**0.72**
ME20B2	7/10/1995	<2	**120**	**63**
ME20B2	10/9/1995	<2	**110**	**61**
ME20B2	1/15/1996	<1.3	**53**	**40**
ME20B2	4/15/1996	<2.5	**96**	**54**
ME20B2	7/15/1996	<2	**120**	**72**
ME20B2	10/14/1996	<2	**120**	**78**
ME20B2	1/13/1997	<2.5	**130**	**84**
ME20B2	10/29/1997	<5	**91**	**100**
ME20B2	10/23/1998	<2.5	**64**	**57**
ME20B2	10/15/1999	<5	**120**	**120**
ME20B2	10/11/2000	<0.5	**78**	**46**
ME20B2	11/5/2003	<0.5	**22**	**17**
ME20B2	10/20/2004	<0.5	**19**	**21**
ME25A	7/22/1986	<5	**330**	**240**
ME25A	8/25/1986	**54**	**320**	NA[3]
ME25A	11/11/1986	<99	**600**	NA
ME25A	2/5/1987	<99	**280**	NA
ME25A	3/16/1988	<99	**390**	NA
ME25A	5/13/1988	<99	**500**	NA
ME25A	1/15/1992	**18**	**230**	**250**
ME25A	4/23/1992	**12**	**220**	**420**
ME25A	7/17/1992	**25**	**440**	**710**
ME25A	10/23/1992	**39**	**640**	**830**
ME25A	1/27/1993	**14**	**410**	**540**
ME25A	4/12/1993	**35**	**510**	**680**
ME25A	7/12/1993	**36**	**640**	**840**
ME25A	10/11/1993	**34**	**590**	**960**
ME25A	1/11/1994	**29**	**480**	**600**
ME25A	4/11/1994	**34**	**530**	**610**
ME25A	7/12/1994	**37**	**580**	**650**
ME25A	10/13/1994	**33**	**500**	**610**
ME25A	1/10/1995	**20**	**360**	**450**
ME25A	4/10/1995	**26**	**500**	**580**
ME25A	7/10/1995	**14**	**260**	**350**
ME25A	10/9/1995	**34**	**570**	**670**
ME25A	1/15/1996	**27**	**350**	**500**
ME25A	4/15/1996	**24**	**430**	**530**
ME25A	7/15/1996	**21**	**380**	**440**
ME25A	10/14/1996	**26**	**500**	**640**

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
ME25A	1/13/1997	**25**	**480**	**600**
ME25A	10/28/1997	<10	**190**	**260**
ME25A	10/26/1999	**15**	**350**	**380**
ME25A	10/11/2000	**17**	**340**	**320**
ME26A	8/25/1986	<99	**17**	NA
ME26A	11/11/1986	<99	**32**	NA
ME26A	2/5/1987	<99	**21**	NA
ME26A	3/16/1988	<99	<99	NA
ME26A	5/13/1988	<99	<99	NA
ME26A	1/15/1992	<1	**27**	**210**
ME26A	4/23/1992	<8	**110**	**770**
ME26A	7/17/1992	<14	**69**	**800**
ME26A	10/23/1992	<10	**42**	**770**
ME26A	1/27/1993	**100**	**110**	<50
ME26A	4/12/1993	**11**	**150**	**860**
ME26A	7/12/1993	<20	**99**	**1100**
ME26A	10/11/1993	**5.9**	**97**	**1300**
ME26A	1/11/1994	<5	**100**	**1100**
ME26A	4/11/1994	<17	**120**	**1100**
ME26A	7/12/1994	<20	**110**	**1300**
ME26A	10/13/1994	<2	**160**	**1100**
ME26A	1/10/1995	<10	**95**	**730**
ME26A	4/10/1995	<12	**160**	**1100**
ME26A	7/10/1995	<14	**140**	**720**
ME26A	10/9/1995	<6.2	**180**	**970**
ME26A	1/15/1996	<13	**160**	**870**
ME26A	4/15/1996	<10	**140**	**730**
ME26A	7/15/1996	<12	**190**	**870**
ME26A	10/14/1996	<11	**200**	**950**
ME26A	1/13/1997	<12	**200**	**790**
ME26A	10/28/1997	<10	**130**	**540**
ME26A	2/15/1999	**9.9**	**290**	**620**
ME26A	10/15/1999	<17	**170**	**410**
ME26A	10/11/2000	**9.7**	**170**	**400**
ME26A	11/1/2002	**12**	**260**	**420**
ME26A	11/5/2003	**10**	**180**	**330**
ME26A	10/13/2004	**7.6**	**160**	**290**
ME27A	7/22/1986	<5	<5	<5
ME27A	8/25/1986	<99	<99	NA
ME27A	11/24/1986	**2**	**1**	NA

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
ME27A	2/5/1987	<99	<99	NA
ME27A	1/15/1992	**1.1**	**4.6**	**140**
ME27A	4/23/1992	**5.2**	**9.7**	**200**
ME27A	7/17/1992	**3.3**	**8.7**	**150**
ME27A	10/23/1992	**3.3**	**8**	**140**
ME27A	1/27/1993	<10	**230**	**110**
ME27A	4/12/1993	<2	**10**	**130**
ME27A	7/12/1993	<2	**7.5**	**140**
ME27A	10/11/1993	**2.2**	**11**	**200**
ME27A	1/11/1994	<5	**9.5**	**130**
ME27A	4/11/1994	<2	**13**	**170**
ME27A	7/12/1994	<2.5	**17**	**210**
ME27A	10/14/1994	<2	**12**	**150**
ME27A	1/10/1995	<2.5	**12**	**140**
ME27A	4/10/1995	<2	**13**	**150**
ME27A	7/10/1995	<2	**15**	**150**
ME27A	10/9/1995	<2	**15**	**160**
ME27A	1/15/1996	<2.5	**14**	**140**
ME27A	4/15/1996	<2	**15**	**140**
ME27A	7/15/1996	<2	**16**	**160**
ME27A	10/14/1996	<2	**16**	**170**
ME27A	1/13/1997	<2.5	**18**	**170**
ME27A	10/28/1997	<2.5	**5.7**	**87**
ME27A	10/15/1999	<5	**16**	**160**
ME27A	10/11/2000	**2**	**13**	**150**
ME27A	11/1/2002	<5	**17**	**170**
ME27A	11/5/2003	<5	**15**	**210**
ME27A	10/13/2004	<1.7	**14**	**190**
ME28A	7/22/1986	<5	**150**	**600**
ME28A	8/25/1986	**59**	**430**	NA
ME28A	11/11/1986	<99	**690**	NA
ME28A	2/5/1987	**13**	**200**	NA
ME28A	3/1/1988	<99	**480**	NA
ME28A	5/13/1988	<99	**520**	NA
ME28A	1/15/1992	**6.2**	**190**	**220**
ME28A	4/23/1992	**10**	**240**	**610**
ME28A	7/17/1992	**10**	**270**	**750**
ME28A	10/23/1992	<10	**240**	**710**
ME28A	1/27/1993	<100	**320**	**330**
ME28A	4/12/1993	**12**	**320**	**590**

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
ME28A	7/12/1993	<10	**290**	**660**
ME28A	10/11/1993	**9.7**	**310**	**780**
ME28A	1/11/1994	**6.9**	**260**	**450**
ME28A	4/11/1994	**6.3**	**240**	**480**
ME28A	7/12/1994	**7.4**	**330**	**540**
ME28A	10/14/1994	<10	**320**	**530**
ME28A	1/10/1995	<5	**220**	**360**
ME28A	4/12/1995	**7.2**	**330**	**540**
ME28A	7/10/1995	**5.3**	**240**	**380**
ME28A	10/9/1995	**7.8**	**370**	**560**
ME28A	1/15/1996	<10	**240**	**390**
ME28A	4/15/1996	**6.1**	**290**	**410**
ME28A	7/15/1996	**6**	**300**	**400**
ME28A	10/14/1996	**8.6**	**390**	**550**
ME28A	1/13/1997	<10	**350**	**410**
ME28A	10/29/1997	<10	**320**	**460**
ME28A	2/15/1999	<5	**320**	**460**
ME28A	10/26/1999	<17	**240**	**420**
ME28A	10/12/2000	**3.7**	**210**	**340**
ME28A	10/13/2004	**5**	**200**	**260**
ME38A	12/10/1986	**29**	**290**	NA
ME38A	2/6/1987	<99	**74**	NA
ME38A	3/16/1988	<99	**480**	NA
ME38A	1/16/1992	**16**	**1900**	<2.5
ME38A	4/23/1992	<20	**1400**	**1500**
ME38A	7/17/1992	<20	**1600**	**1400**
ME38A	10/23/1992	<20	**1400**	**1200**
ME38A	1/27/1993	<100	**1100**	**680**
ME38A	4/12/1993	**19**	**1100**	**1000**
ME38A	7/12/1993	<20	**1100**	**970**
ME38A	10/11/1993	**19**	**1200**	**1500**
ME38A	1/11/1994	**17**	**920**	**890**
ME38A	4/11/1994	**16**	**1100**	**990**
ME38A	7/15/1994	<20	**1200**	**1000**
ME38A	10/13/1994	**16**	**1100**	**1000**
ME38A	1/11/1995	**14**	**650**	**620**
ME38A	4/12/1995	**20**	**790**	**680**
ME38A	7/11/1995	**17**	**1100**	**890**
ME38A	10/9/1995	**18**	**1300**	**1000**
ME38A	1/15/1996	**22**	**870**	**770**

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
ME38A	4/15/1996	**18**	**1000**	**810**
ME38A	7/15/1996	**14**	**1000**	**800**
ME38A	10/14/1996	**16**	**860**	**750**
ME38A	1/13/1997	<25	**1000**	**730**
ME38A	10/30/1997	<25	**680**	**720**
ME38A	10/23/1998	**11**	**480**	**510**
ME38A	10/15/1999	**11**	**550**	**540**
ME38A	10/12/2000	**10**	**420**	**420**
ME38A	10/31/2002	<25	**550**	**370**
ME38A	11/5/2003	**11**	**390**	**340**
ME38A	10/12/2004	**8.5**	**330**	**270**
ME38A	10/12/2005	**10**	**430**	**310**
ME39A	12/10/1986	**11**	**39**	NA
ME39A	2/6/1987	<99	**2**	NA
ME39A	3/1/1988	**39**	**160**	NA
ME39A	1/16/1992	**19**	**4.2**	<1
ME39A	4/23/1992	**17**	**93**	**250**
ME39A	7/17/1992	**12**	**48**	**54**
ME39A	10/23/1992	**15**	**73**	**62**
ME39A	1/27/1993	**18**	**120**	**84**
ME39A	4/12/1993	**19**	**86**	**83**
ME39A	7/12/1993	**22**	**110**	**84**
ME39A	10/11/1993	**24**	**110**	**130**
ME39A	1/11/1994	**21**	**110**	**95**
ME39A	4/11/1994	**8.5**	**43**	**52**
ME39A	7/15/1994	**12**	**62**	**78**
ME39A	10/13/1994	**8.7**	**52**	**75**
ME39A	1/9/1995	**15**	**80**	**97**
ME39A	4/12/1995	**18**	**89**	**110**
ME39A	7/11/1995	**17**	**86**	**93**
ME39A	10/9/1995	**17**	**85**	**110**
ME39A	1/15/1996	**16**	**60**	**82**
ME39A	4/15/1996	**17**	**92**	**120**
ME39A	7/15/1996	**17**	**89**	**120**
ME39A	10/14/1996	**19**	**97**	**130**
ME39A	1/13/1997	<2.5	**100**	**140**
ME39A	10/29/1997	**15**	**79**	**170**
ME39A	10/26/1999	<31	**280**	**710**
ME39A	10/13/2000	**13**	**51**	**130**
ME41A	3/1/1988	<99	**90**	NA

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
ME41A	1/16/1992	<0.5	<0.5	**17**
ME41A	4/23/1992	<5	**36**	**370**
ME41A	7/17/1992	<6.7	**44**	**180**
ME41A	10/23/1992	<2	**13**	**300**
ME41A	1/27/1993	<20	**37**	**300**
ME41A	4/12/1993	<2.5	**33**	**210**
ME41A	7/12/1993	<4	**42**	**250**
ME41A	10/11/1993	<2	**25**	**190**
ME41A	1/12/1994	<5	**12**	**120**
ME41A	4/11/1994	<2	**19**	**160**
ME41A	7/15/1994	<2.2	**25**	**160**
ME41A	10/14/1994	<2	**29**	**170**
ME41A	1/10/1995	<1.3	**20**	**74**
ME41A	4/10/1995	**3.1**	**62**	**290**
ME41A	7/11/1995	<2.9	**52**	**240**
ME41A	10/9/1995	<4	**77**	**340**
ME41A	1/15/1996	<5	**45**	**220**
ME41A	4/15/1996	<2.5	**50**	**230**
ME41A	10/14/1996	<3.3	**68**	**290**
ME41A	1/13/1997	<2.5	**42**	**190**
ME41A	10/29/1997	<5	**41**	**150**
ME41A	10/23/1998	<2.5	**26**	**83**
ME41A	10/26/1999	<5	**55**	**140**
ME41A	10/11/2000	**1.8**	**51**	**150**
ME42A	1/15/1992	**50**	**540**	**180**
ME42A	4/23/1992	**29**	**240**	**140**
ME42A	7/17/1992	**51**	**330**	**140**
ME42A	10/23/1992	**19**	**180**	**190**
ME42A	1/27/1993	<20	**230**	**200**
ME42A	4/12/1993	**30**	**230**	**240**
ME42A	7/12/1993	**25**	**210**	**210**
ME42A	10/11/1993	**36**	**280**	**310**
ME42A	1/13/1994	**12**	**120**	**170**
ME42A	4/14/1994	**47**	**270**	**210**
ME42A	7/15/1994	**28**	**190**	**250**
ME42A	10/13/1994	**33**	**220**	**280**
ME42A	1/9/1995	**20**	**140**	**190**
ME42A	4/12/1995	**32**	**190**	**440**
ME42A	7/11/1995	**30**	**190**	**260**
ME42A	10/9/1995	**37**	**210**	**380**

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
ME42A	1/15/1996	**36**	**130**	**230**
ME42A	4/15/1996	**38**	**200**	**370**
ME42A	7/15/1996	**30**	**170**	**220**
ME42A	10/14/1996	**40**	**200**	**320**
ME42A	1/13/1997	**29**	**160**	**220**
ME42A	10/30/1997	**28**	**160**	**250**
ME42A	10/26/1999	**29**	**180**	**230**
ME42A	10/13/2000	**35**	**180**	**250**
ME43A	1/16/1992	**3.9**	**27**	**37**
ME43A	4/23/1992	<2	**14**	**30**
ME43A	7/17/1992	**2.7**	**21**	**41**
ME43A	10/23/1992	<2	<2	**4.5**
ME43A	1/27/1993	<10	**200**	**220**
ME43A	4/12/1993	<2	**4.3**	**13**
ME43A	7/12/1993	<2	<2	**2.4**
ME43A	10/11/1993	<2	**3**	**13**
ME43A	1/11/1994	<0.5	**1.1**	**2.3**
ME43A	4/11/1994	<2	**3.4**	**9.1**
ME43A	7/15/1994	<2	<2	**4.6**
ME43A	10/13/1994	<2	<2	**3.5**
ME43A	1/11/1995	<0.5	**2.3**	**4.8**
ME43A	4/10/1995	<2	**9**	**17**
ME43A	7/10/1995	<2	**6.4**	**12**
ME43A	10/9/1995	<2	**5.5**	**14**
ME43A	1/15/1996	<0.5	**1.1**	**4.9**
ME43A	4/15/1996	<2	**4.5**	**30**
ME43A	7/15/1996	<2	**8.3**	**17**
ME43A	10/14/1996	**2.7**	**49**	**140**
ME43A	1/13/1997	**1.9**	**10**	**18**
ME43A	10/27/1997	<0.5	**5.1**	**13**
ME43A	10/26/1999	**16**	**130**	**220**
ME43A	10/13/2000	**19**	**150**	**220**
ME43A	11/5/2003	**13**	**96**	**220**
ME43A	10/10/2007	**16**	**60**	**150**
ME43A	10/8/2008	**8.6**	**36**	**91**
ME43A	10/16/2009	**19**	**83**	**140**
ME43A	10/13/2010	**8.7**	**44**	**160**
ME43A	10/11/2011	**10**	**50**	**140**
ME43A	10/9/2012	**8.1**	**38**	**97**
ME43A	10/15/2013	**8.3**	**38**	**98**

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
MM01A	5/26/1982	**50**	**200**	NA
MM01A	7/23/1982	**62**	**300**	NA
MM01A	8/20/1984	**39**	**70**	NA
MM01A	1/22/1985	**130**	**410**	NA
MM01A	8/13/1985	<99	<99	NA
MM01A	7/18/1986	**34**	**56**	**6.3**
MM01A	11/12/1986	**48**	**70**	NA
MM01A	2/5/1987	**20**	**42**	NA
MM01A	10/20/1992	**8.1**	NA	**1.7**
MM01A	11/16/1993	**8.1**	NA	**21**
MM01A	10/13/1994	**7.5**	NA	**20**
MM01A	10/10/1995	**8.1**	NA	**14**
MM01A	10/15/1996	**7**	NA	**5.2**
MM01A	10/28/1997	**6.1**	NA	**3.9**
MM01A	4/15/1998	**3.6**	NA	**1.9**
MM01A	10/21/1998	**4.3**	NA	**2.6**
MM01A	10/26/1999	**4.2**	NA	**3.2**
MM01A	10/12/2000	**4.7**	**23**	**2.2**
MM01A	10/15/2013	**1.3**	**9.5**	**130**
MM01B2	1/22/1985	<99	**5**	NA
MM01B2	8/9/1985	<99	**13**	NA
MM01B2	7/18/1986	<0.5	**160**	**140**
MM01B2	11/12/1986	<99	**450**	NA
MM01B2	2/20/1987	<99	**200**	NA
MM01B2	4/21/1992	<0.5	NA	<0.5
MM01B2	10/20/1992	**2**	NA	**2.2**
MM01B2	4/13/1993	<10	NA	**70**
MM01B2	11/16/1993	**0.92**	NA	**0.65**
MM01B2	4/12/1994	**0.62**	NA	<0.5
MM01B2	10/13/1994	**1.5**	NA	**3.7**
MM01B2	4/11/1995	**2.5**	NA	**6.7**
MM01B2	10/10/1995	<0.5	NA	<0.5
MM01B2	4/17/1996	**3**	NA	**11**
MM01B2	10/15/1996	<2.5	NA	**20**
MM01B2	10/28/1997	**2.4**	NA	**5.8**
MM01B2	10/21/1998	<0.5	NA	<0.5
MM01B2	10/26/1999	<5	NA	<5
MM01B2	10/16/2000	<0.5	<0.5	<0.5
MM01B2	10/13/2004	**1.1**	**2.9**	**0.8**
MM02A	1/15/1992	<2	NA	**22**

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
MM02A	7/14/1992	<5	NA	**47**
MM02A	1/28/1993	**24**	NA	<10
MM02A	7/15/1993	<10	NA	**39**
MM02A	1/13/1994	<5	NA	**76**
MM02A	7/14/1994	<2.5	NA	**84**
MM02A	1/10/1995	**0.8**	NA	**20**
MM02A	7/12/1995	<1	NA	**58**
MM02A	1/17/1996	<1	NA	**40**
MM02A	7/17/1996	<2.5	NA	**130**
MM02A	1/15/1997	<0.5	NA	**20**
MM02A	10/31/1997	<2.5	NA	**76**
MM02C	1/14/1992	<0.5	NA	<0.5
MM02C	7/14/1992	<0.5	NA	<0.5
MM02C	1/28/1993	<0.5	NA	<0.5
MM02C	7/13/1993	<0.5	NA	<0.5
MM02C	1/12/1994	<0.5	NA	<0.5
MM02C	7/12/1994	<0.5	NA	<0.5
MM02C	1/10/1995	<0.5	NA	<0.5
MM02C	7/12/1995	<0.5	NA	<0.5
MM02C	1/17/1996	<0.5	NA	<0.5
MM02C	7/17/1996	<0.5	NA	<0.5
MM02C	1/15/1997	<0.5	NA	<0.5
MM02C	10/31/1997	<0.5	NA	<0.5
MM02C	1/22/1999	<0.5	NA	<0.5
MM02C	10/26/1999	<5	NA	<5
MM02C	10/16/2000	<0.5	<0.5	<0.5
MM04A	7/13/1982	**110**	**910**	NA
MM04A	8/17/1984	**59**	**160**	NA
MM04A	1/23/1985	**86**	**280**	NA
MM04A	8/14/1985	**84**	**250**	NA
MM04A	7/18/1986	**210**	**350**	**100**
MM04A	9/5/1986	**210**	**270**	NA
MM04A	11/11/1986	**210**	**400**	NA
MM04A	2/11/1987	**120**	**350**	NA
MM04A	10/21/1992	**58**	NA	**100**
MM04A	10/13/1993	**58**	NA	**95**
MM04A	10/17/1994	**59**	NA	**100**
MM04A	10/10/1995	**16**	NA	**25**
MM04A	10/15/1996	**44**	NA	**110**
MM04A	10/30/1997	**38**	NA	**110**

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
MM04A	4/15/1998	**32**	NA	**79**
MM04A	10/23/1998	**27**	NA	**59**
MM04A	10/27/1999	**25**	NA	**100**
MM04A	10/13/2000	**49**	**160**	**84**
MM05A	7/13/1982	**24**	**74**	NA
MM05A	8/5/1982	<1	**35**	NA
MM05A	8/20/1984	**6**	**120**	NA
MM05A	1/23/1985	**16**	**600**	NA
MM05A	7/21/1986	**16**	**270**	**1600**
MM05A	11/13/1986	<99	**770**	NA
MM05A	2/6/1987	<99	**400**	NA
MM05A	2/18/1988	<99	**210**	NA
MM05A	1/14/1992	<5	NA	**250**
MM05A	7/15/1992	<50	NA	**900**
MM05A	1/29/1993	<10	NA	**560**
MM05A	7/15/1993	<10	NA	**580**
MM05A	1/14/1994	**12**	NA	**450**
MM05A	7/14/1994	**11**	NA	**400**
MM05A	1/10/1995	<10	NA	**480**
MM05A	7/11/1995	**9.3**	NA	**410**
MM05A	1/16/1996	**8.8**	NA	**270**
MM05A	7/16/1996	**7.2**	NA	**220**
MM05A	1/14/1997	**7.9**	NA	**190**
MM05A	10/29/1997	**5.8**	NA	**180**
MM05A	10/27/1999	<13	NA	**370**
MM05A	1/6/2000	<13	NA	**370**
MM05A	10/13/2000	**6.2**	**230**	**340**
MM06A	7/13/1982	**7**	**84**	NA
MM06A	8/20/1984	<99	<99	NA
MM06A	1/23/1985	**18**	**1200**	NA
MM06A	8/13/1985	**13**	**1200**	NA
MM06A	7/21/1986	**35**	**750**	**2700**
MM06A	11/13/1986	<99	**850**	NA
MM06A	2/11/1987	<99	**710**	NA
MM06A	2/20/1987	<99	**710**	NA
MM06A	2/18/1988	<99	**110**	NA
MM06A	5/13/1988	<99	**640**	NA
MM06A	1/15/1992	**11**	NA	**960**
MM06A	4/22/1992	<100	NA	**800**
MM06A	7/16/1992	<50	NA	**800**

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
MM06A	10/20/1992	**11**	NA	**300**
MM06A	1/29/1993	<100	NA	**470**
MM06A	4/15/1993	**4.9**	NA	**370**
MM06A	7/15/1993	<10	NA	**500**
MM06A	11/16/1993	**5.9**	NA	**360**
MM06A	1/12/1994	<5	NA	**430**
MM06A	4/13/1994	**5.8**	NA	**380**
MM06A	7/14/1994	<5	NA	**390**
MM06A	1/10/1995	<10	NA	**480**
MM06A	4/11/1995	<10	NA	**76**
MM06A	7/11/1995	<5	NA	**370**
MM06A	10/11/1995	<10	NA	**280**
MM06A	1/16/1996	<5	NA	**240**
MM06A	4/16/1996	<5	NA	**310**
MM06A	7/16/1996	<5	NA	**240**
MM06A	10/16/1996	<5	NA	**260**
MM06A	1/14/1997	<5	NA	**280**
MM06A	10/29/1997	<10	NA	**330**
MM06A	10/21/1998	<5	NA	**300**
MM06A	10/27/1999	<17	NA	**330**
MM06A	10/13/2000	**4.6**	**230**	**330**
MM06B1	1/23/1985	<99	**3**	NA
MM06B1	8/13/1985	<99	**2**	NA
MM06B1	7/21/1986	<5	<5	<5
MM06B1	11/13/1986	<99	**1**	NA
MM06B1	2/6/1987	<99	**0.6**	NA
MM06B1	4/22/1992	<0.5	NA	**1.9**
MM06B1	10/21/1992	<0.5	NA	**2.7**
MM06B1	4/13/1993	<1	NA	**4.1**
MM06B1	11/16/1993	<0.5	NA	**1.1**
MM06B1	4/12/1994	<0.5	NA	**1.9**
MM06B1	10/14/1994	<0.5	NA	<0.5
MM06B1	4/11/1995	<0.5	NA	<0.5
MM06B1	10/10/1995	<0.5	NA	**0.6**
MM06B1	4/16/1996	<0.5	NA	**0.88**
MM06B1	10/16/1996	<0.5	NA	<0.5
MM06B1	10/29/1997	<0.5	NA	<0.5
MM06B1	10/21/1998	<0.5	NA	<0.5
MM06B1	10/26/1999	<5	NA	<5
MM06B1	10/16/2000	<0.5	<0.5	**0.5**

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
MM06B1	10/31/2002	<0.5	<0.5	<0.5
MM06B1	11/6/2003	<0.5	<0.5	<0.5
MM06B1	10/13/2004	<0.5	<0.5	<0.5
MM07A	7/13/1982	**43**	**1150**	NA
MM07A	8/17/1984	**5**	**47**	NA
MM07A	1/23/1985	<99	**74**	NA
MM07A	8/13/1985	**22**	**220**	NA
MM07A	7/21/1986	**52**	**220**	**510**
MM07A	11/13/1986	<99	**290**	NA
MM07A	2/11/1987	**17**	**230**	NA
MM07A	10/21/1992	**1.4**	NA	**130**
MM07A	10/13/1993	**3.9**	NA	**300**
MM07A	10/17/1994	<5	NA	**260**
MM07A	10/11/1995	<5	NA	**330**
MM07A	10/15/1996	<10	NA	**380**
MM07A	10/29/1997	<5	NA	**440**
MM07A	4/15/1998	<12	NA	**240**
MM07A	10/27/1999	**5.2**	NA	**200**
MM07A	10/13/2000	**4.5**	**54**	**280**
MM07A	10/11/2006	**9.4**	**75**	**330**
MM07A	10/11/2007	**9.2**	**91**	**470**
MM07A	10/7/2008	**10**	**69**	**310**
MM07A	10/14/2009	**12**	**81**	**390**
MM07A	10/12/2010	**9**	**52**	**280**
MM07A	10/11/2011	**7.9**	**59**	**340**
MM07A	10/11/2012	**9.9**	**72**	**410**
MM07A	10/16/2013	**9.9**	**71**	**370**
MM08A	10/5/1982	**5100**	**70**	NA
MM08A	8/21/1984	**980**	**26**	NA
MM08A	1/24/1985	**2400**	**190**	NA
MM08A	8/15/1985	**1000**	<99	NA
MM08A	9/5/1986	<99	**8**	NA
MM08A	2/11/1987	<99	**920**	NA
MM08A	5/27/1988	<99	<99	NA
MM08A	1/16/1992	**43**	NA	<10
MM08A	4/16/1993	**11**	NA	**34**
MM08A	1/13/1994	**13**	NA	**67**
MM08A	1/11/1995	**3**	NA	**65**
MM08A	1/17/1996	<12	NA	**810**
MM08A	1/15/1997	**1.9**	NA	**0.85**

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
MM08A	10/31/1997	**14**	NA	**230**
MM08A	4/16/1998	**14**	NA	**130**
MM08A	10/12/2000	**26**	**66**	**170**
MM10A	12/28/1982	**7**	<5	NA
MM10A	1/7/1983	**34**	**17**	NA
MM10A	8/21/1984	**5**	<99	NA
MM10A	1/24/1985	**3**	**5**	NA
MM10A	8/15/1985	**4**	**5**	NA
MM10A	7/18/1986	<5	<5	**19**
MM10A	9/5/1986	<99	<99	NA
MM10A	11/11/1986	<99	<99	NA
MM10A	2/6/1987	<99	<99	NA
MM10A	10/20/1992	**1.2**	NA	**33**
MM10A	10/13/1993	**2.6**	NA	**190**
MM10A	10/17/1994	<5	NA	**50**
MM10A	10/11/1995	<0.5	NA	**18**
MM10A	10/16/1996	**1.3**	NA	**57**
MM10A	10/31/1997	**0.56**	NA	**50**
MM10A	4/16/1998	<0.5	NA	**5.2**
MM10A	10/23/1998	**1.9**	NA	**150**
MM10A	10/26/1999	<5	NA	**66**
MM10A	10/13/2000	**1.9**	**7.7**	**57**
MM10B	4/24/1992	<0.5	NA	**11**
MM10B	10/21/1992	<0.5	NA	**6.3**
MM10B	4/13/1993	<10	NA	**170**
MM10B	11/16/1993	<0.5	NA	**2.6**
MM10B	4/12/1994	<0.5	NA	**0.79**
MM10B	10/14/1994	<0.5	NA	**12**
MM10B	4/12/1995	<0.5	NA	**3.2**
MM10B	10/11/1995	<0.5	NA	**2.9**
MM10B	4/17/1996	<2.5	NA	**130**
MM10B	10/31/1997	<0.5	NA	**7.8**
MM10B	10/21/1998	<0.5	NA	**4**
MM10B	10/16/2000	<0.5	**6.7**	**4.3**
MM11A	1/23/1985	**4**	**17**	NA
MM11A	8/8/1985	**2**	**14**	NA
MM11A	7/22/1986	**6.6**	**13**	**6.5**
MM11A	11/11/1986	**6**	**29**	NA
MM11A	2/6/1987	**2**	**6**	NA
MM11A	10/20/1992	<0.5	NA	**14**

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
MM11A	10/13/1993	**3.6**	NA	**3.9**
MM11A	10/14/1994	<0.5	NA	**11**
MM11A	10/10/1995	<0.5	NA	**1.4**
MM11A	10/16/1996	**0.59**	NA	**3.4**
MM11A	10/29/1997	**0.57**	NA	**12**
MM11A	4/15/1998	<0.5	NA	**2**
MM11A	10/21/1998	<0.5	NA	**2.6**
MM11A	10/26/1999	<5	NA	<5
MM11A	10/12/2000	**0.7**	**2.1**	**2.9**
MM12A	1/22/1985	**10**	**38**	NA
MM12A	8/8/1985	**20**	**77**	NA
MM12A	7/21/1986	**12**	**21**	**25**
MM12A	11/11/1986	**0.7**	**5**	NA
MM12A	2/11/1987	**2.7**	**1.4**	NA
MM12A	10/20/1992	**6.8**	NA	**17**
MM12A	10/13/1993	**5.1**	NA	**33**
MM12A	10/13/1994	**2.9**	NA	**36**
MM12A	10/10/1995	**2**	NA	**15**
MM12A	10/15/1996	**4.2**	NA	**4**
MM12A	10/28/1997	**1.2**	NA	**22**
MM12A	10/23/1998	**2**	NA	**4.8**
MM12A	10/12/2000	**2.2**	**6.9**	**2.8**
MM13A	1/23/1985	**28**	**350**	NA
MM13A	8/14/1985	**40**	**350**	NA
MM13A	7/22/1986	**40**	**400**	**6.5**
MM13A	11/13/1986	<99	**620**	NA
MM13A	2/11/1987	**38**	**530**	NA
MM13A	5/13/1988	<99	**610**	NA
MM13A	4/23/1992	<100	NA	**590**
MM13A	10/22/1992	<25	NA	**440**
MM13A	4/15/1993	**7.9**	NA	**360**
MM13A	10/13/1993	**18**	NA	**600**
MM13A	4/13/1994	**18**	NA	**420**
MM13A	10/17/1994	**15**	NA	**520**
MM13A	4/12/1995	<10	NA	**46**
MM13A	10/11/1995	**6.8**	NA	**420**
MM13A	4/16/1996	**14**	NA	**510**
MM13A	10/15/1996	**20**	NA	**600**
MM13A	10/30/1997	**15**	NA	**630**
MM13A	10/27/1999	**12**	NA	**420**

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
MM13A	10/16/2000	**11**	**340**	**340**
MM14A	1/23/1985	**28**	**110**	NA
MM14A	8/8/1985	**82**	**330**	NA
MM14A	7/22/1986	**49**	**100**	**63**
MM14A	11/12/1986	**110**	**180**	NA
MM14A	2/5/1987	**55**	**150**	NA
MM14A	2/17/1988	**48**	**200**	NA
MM14A	5/11/1988	**40**	**170**	NA
MM14A	1/15/1992	**5.2**	NA	**27**
MM14A	4/23/1992	**25**	NA	**52**
MM14A	7/15/1992	**15**	NA	**56**
MM14A	10/21/1992	**20**	NA	**40**
MM14A	1/29/1993	<10	NA	**45**
MM14A	4/14/1993	**18**	NA	**54**
MM14A	7/14/1993	<10	NA	**64**
MM14A	10/13/1993	**16**	NA	**47**
MM14A	1/13/1994	**8.6**	NA	**43**
MM14A	4/12/1994	**4.5**	NA	**43**
MM14A	7/12/1994	**17**	NA	**70**
MM14A	10/14/1994	**5.3**	NA	**52**
MM14A	1/10/1995	**7.7**	NA	**49**
MM14A	4/12/1995	<10	NA	**270**
MM14A	7/11/1995	**22**	NA	**69**
MM14A	10/10/1995	**8.4**	NA	**24**
MM14A	1/16/1996	**9.4**	NA	**76**
MM14A	4/16/1996	**12**	NA	**92**
MM14A	7/16/1996	**17**	NA	**120**
MM14A	10/15/1996	**6**	NA	**88**
MM14A	1/14/1997	<2.5	NA	**61**
MM14A	10/29/1997	**8.7**	NA	**160**
MM14A	10/22/1998	**18**	NA	**160**
MM14A	10/26/1999	**7.6**	NA	**130**
MM14A	10/12/2000	**13**	**43**	**180**
MM14B1	1/23/1985	<99	**170**	NA
MM14B1	8/12/1985	<99	**190**	NA
MM14B1	7/18/1986	<5	**300**	**610**
MM14B1	11/12/1986	<99	**370**	NA
MM14B1	2/4/1987	<99	**350**	NA
MM14B1	1/14/1992	<5	NA	**210**
MM14B1	7/15/1992	**0.8**	NA	**58**

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
MM14B1	1/29/1993	<5	NA	<5
MM14B1	7/14/1993	<10	NA	**130**
MM14B1	1/13/1994	<0.5	NA	**100**
MM14B1	7/12/1994	<1	NA	**48**
MM14B1	1/10/1995	**0.86**	NA	**30**
MM14B1	7/11/1995	<1	NA	**59**
MM14B1	1/16/1996	<1	NA	**51**
MM14B1	7/16/1996	<1	NA	**47**
MM14B1	1/14/1997	<1	NA	**55**
MM14B1	10/29/1997	<1	NA	**29**
MM14B1	10/22/1998	<0.5	NA	**22**
MM14B1	10/26/1999	<5	NA	**25**
MM14B1	10/16/2000	<0.5	**35**	**110**
MM14B1	10/31/2002	<10	**15**	**23**
MM14B1	11/6/2003	**0.73**	**18**	**59**
MM14B1	10/12/2004	**0.6**	**6.4**	**17**
MM14B1	10/14/2005	<0.5	**32**	**92**
MM14B1	10/11/2006	<0.5	**13**	**46**
MM14B1	10/11/2007	<0.5	**13**	**40**
MM14B1	10/8/2008	<0.5	**11**	**28**
MM14B1	10/14/2009	<0.5	**5.1**	**11**
MM14B1	10/12/2010	<0.5	**4.8**	**7.9**
MM14B1	10/11/2011	<0.5	**2.8**	**4.7**
MM14B1	10/9/2012	<0.5	**2.3**	**2.7**
MM14B1	10/16/2013	<0.5	**1.6**	**1.3**
MM14B3	7/2/1985	<99	**16**	NA
MM14B3	8/7/1985	<99	**22**	NA
MM14B3	7/21/1986	<5	<5	<0.5
MM14B3	11/11/1986	<99	**1**	NA
MM14B3	2/4/1987	<99	**1.8**	NA
MM14B3	2/16/1988	<99	<99	NA
MM14B3	1/14/1992	<0.5	NA	**0.62**
MM14B3	7/14/1992	<0.5	NA	<0.5
MM14B3	1/28/1993	<0.5	NA	<0.5
MM14B3	7/13/1993	<0.5	NA	<0.5
MM14B3	1/12/1994	<0.5	NA	<0.5
MM14B3	7/12/1994	<0.5	NA	<0.5
MM14B3	1/10/1995	<0.5	NA	<0.5
MM14B3	7/11/1995	<0.5	NA	<0.5
MM14B3	1/16/1996	<0.5	NA	<0.5

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
MM14B3	7/16/1996	<0.5	NA	<0.5
MM14B3	1/14/1997	<0.5	NA	<0.5
MM14B3	10/29/1997	<0.5	NA	<0.5
MM14B3	1/21/1999	<0.5	NA	<0.5
MM14B3	10/26/1999	<5	NA	<5
MM14B3	10/16/2000	<0.5	<0.5	<0.5
MM14B3	10/31/2002	<0.5	<0.5	<0.5
MM14B3	11/6/2003	<0.5	<0.5	<0.5
MM14B3	10/12/2004	<0.5	<0.5	<0.5
MM14B3	10/12/2005	<0.5	<0.5	<0.5
MM14B3	10/11/2006	<0.5	<0.5	<0.5
MM14B3	10/11/2007	<0.5	<0.5	<0.5
MM14B3	10/9/2008	<0.5	<0.5	<0.5
MM14B3	10/15/2009	<0.5	<0.5	<0.5
MM17A	6/20/1984	**50**	**170**	NA
MM17A	7/22/1986	**37**	**83**	**48**
MM17A	11/13/1986	**48**	**160**	NA
MM17A	2/11/1987	**36**	**120**	NA
MM17A	3/1/1988	**230**	**90**	NA
MM17A	1/14/1992	**69**	**240**	**360**
MM17A	7/16/1992	<10	**83**	**110**
MM17A	1/29/1993	<10	**180**	**330**
MM17A	7/14/1993	<10	**7**	**51**
MM17A	1/13/1994	**15**	**52**	**39**
MM17A	7/13/1994	**22**	**210**	**330**
MM17A	1/11/1995	**12**	**81**	**78**
MM17A	7/11/1995	**19**	**64**	**23**
MM17A	1/16/1996	**13**	**36**	**17**
MM17A	7/16/1996	**18**	**62**	**41**
MM17A	1/14/1997	**20**	**65**	**32**
MM17A	10/28/1997	**6.8**	**50**	**29**
MM17A	10/22/1998	**19**	**66**	**26**
MM17A	10/26/1999	**15**	**57**	**58**
MM17A	10/12/2000	**24**	**72**	**50**
MM17A	10/11/2001	**20**	**66**	**87**
MM17A	10/13/2005	**12000**	**180**	**110**
MM17A	2/16/2006	**96000**	<500	<500
MM17A	3/22/2006	**5400**	<42	<42
MM17A	4/18/2006	**5300**	**91**	**54**
MM17A	10/9/2006	**2600**	**100**	**110**

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
MM17A	2/2/2007	**3800**	**86**	**92**
MM17A	3/12/2008	**280**	**47**	**22**
MM17A	6/4/2008	**83**	**24**	**12**
MM17A	9/4/2008	**63.6**	**50.3**	**34.3**
MM17A	12/17/2008	**85**	**27**	**37**
MM17A	3/3/2009	**180**	**4.5**	**9.9**
MM17A	6/29/2009	**23**	**25**	**3100**
MM17A	9/22/2009	**100**	**44**	**200**
MM17A	12/10/2009	**140**	**25**	**18**
MM17A	3/18/2010	**150**	**6.7**	**18**
MM17A	9/23/2010	**240**	**80**	**350**
MM17A	3/15/2011	**23**	**2.8**	**72**
MM17A	2/27/2012	**86**	**50**	**60**
MM17A	8/15/2012	**66**	**100**	**100**
MM17A	2/12/2013	**4**	**4.4**	**42**
MM17A	10/17/2013	**34**	**120**	**75**
MM17B1	7/3/1985	<99	**330**	NA
MM17B1	7/18/1986	**6**	**1100**	**3400**
MM17B1	11/12/1986	<99	**440**	NA
MM17B1	2/6/1987	<99	**510**	NA
MM17B1	2/18/1988	<99	**980**	NA
MM17B1	5/11/1988	<99	**930**	NA
MM17B1	1/16/1992	<2.5	NA	<2.5
MM17B1	4/23/1992	<25	NA	**240**
MM17B1	7/15/1992	<50	NA	**650**
MM17B1	10/23/1992	<10	NA	**420**
MM17B1	1/29/1993	<100	NA	**220**
MM17B1	4/15/1993	<1	NA	**71**
MM17B1	7/14/1993	<10	NA	**200**
MM17B1	10/13/1993	**3.8**	NA	**390**
MM17B1	1/14/1994	**7.5**	NA	**730**
MM17B1	4/14/1994	<10	NA	**720**
MM17B1	7/14/1994	<25	NA	**1100**
MM17B1	10/17/1994	<50	NA	**1000**
MM17B1	1/10/1995	<10	NA	**690**
MM17B1	4/12/1995	<10	NA	**56**
MM17B1	7/11/1995	<12	NA	**900**
MM17B1	10/10/1995	**3.8**	NA	**37**
MM17B1	1/16/1996	<13	NA	**700**
MM17B1	4/17/1996	<2.5	NA	**74**

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
MM17B1	7/16/1996	<2.5	NA	**150**
MM17B1	10/15/1996	<10	NA	**480**
MM17B1	1/14/1997	<10	NA	**510**
MM17B1	10/28/1997	<5	NA	**48**
MM17B1	10/22/1998	<5	NA	**570**
MM17B1	10/27/1999	**7.2**	NA	**600**
MM17B1	10/16/2000	**1.6**	**130**	**120**
MM17B1	10/17/2013	<0.5	**1.3**	**0.9**
MM18A	6/21/1985	**80**	**360**	NA
MM18A	7/22/1986	<5	**11**	**29**
MM18A	11/13/1986	**85**	**430**	NA
MM18A	2/11/1987	**7.7**	**240**	NA
MM18A	2/17/1988	**61**	**460**	NA
MM18A	5/12/1988	**28**	**340**	NA
MM18A	1/14/1992	**22**	NA	**190**
MM18A	4/22/1992	<20	NA	**290**
MM18A	7/15/1992	<10	NA	**110**
MM18A	10/21/1992	**12**	NA	**180**
MM18A	1/29/1993	<100	NA	**1100**
MM18A	4/14/1993	**24**	NA	**200**
MM18A	7/15/1993	<10	NA	**260**
MM18A	10/13/1993	**25**	NA	**250**
MM18A	1/12/1994	**26**	NA	**220**
MM18A	4/14/1994	<5	NA	**230**
MM18A	7/13/1994	**29**	NA	**260**
MM18A	10/13/1994	**21**	NA	**170**
MM18A	1/10/1995	**20**	NA	**180**
MM18A	4/11/1995	<10	NA	**47**
MM18A	7/11/1995	**26**	NA	**200**
MM18A	10/11/1995	**12**	NA	**180**
MM18A	1/16/1996	**29**	NA	**230**
MM18A	4/16/1996	**33**	NA	**260**
MM18A	7/17/1996	<5	NA	**230**
MM18A	10/15/1996	**32**	NA	**260**
MM18A	1/14/1997	**35**	NA	**280**
MM18A	10/28/1997	**5.4**	NA	**150**
MM18A	10/27/1999	**24**	NA	**220**
MM18A	10/13/2000	**28**	**240**	**250**
MM18A	10/31/2002	**29**	**270**	**230**
MM18A	11/5/2003	**25**	**170**	**200**

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
MM18A	10/12/2004	**34**	**220**	**190**
MM18A	10/12/2005	**20**	**110**	**63**
MM18B2	7/22/1986	<5	<5	**32**
MM18B2	11/11/1986	<99	**3.3**	NA
MM18B2	2/5/1987	<99	**1.7**	NA
MM18B2	4/22/1992	<0.5	NA	**23**
MM18B2	10/22/1992	<2.5	NA	**6**
MM18B2	4/14/1993	<1	NA	**21**
MM18B2	11/23/1993	<0.5	NA	**27**
MM18B2	4/12/1994	<0.5	NA	**36**
MM18B2	10/14/1994	<0.5	NA	**23**
MM18B2	4/11/1995	<0.5	NA	**13**
MM18B2	10/11/1995	<0.5	NA	**6.8**
MM18B2	4/16/1996	<0.5	NA	**12**
MM18B2	10/15/1996	<0.5	NA	**6.2**
MM18B2	10/28/1997	<0.5	NA	**7**
MM18B2	1/13/1999	<0.5	NA	**2.8**
MM18B2	10/26/1999	<5	NA	**3.6**
MM18B2	10/12/2000	<0.5	**0.8**	<0.5
MM31A	9/5/1986	**29**	**370**	NA
MM31A	11/13/1986	**27**	**420**	NA
MM31A	2/11/1987	**13**	**220**	NA
MM31A	3/1/1988	<99	**700**	NA
MM31A	1/14/1992	**14**	NA	**270**
MM31A	7/16/1992	<10	NA	**81**
MM31A	1/28/1993	<10	NA	**96**
MM31A	7/14/1993	<10	NA	**120**
MM31A	1/14/1994	**15**	NA	**75**
MM31A	7/14/1994	**22**	NA	**280**
MM31A	1/11/1995	**10**	NA	**27**
MM31A	7/12/1995	**9.9**	NA	**25**
MM31A	1/17/1996	**9.4**	NA	**27**
MM31A	7/17/1996	**13**	NA	**460**
MM31A	1/15/1997	**14**	NA	**200**
MM31A	10/28/1997	**6**	NA	**370**
MM31A	4/15/1998	**7.2**	NA	**230**
MM31A	10/22/1998	**5.8**	NA	**280**
MM31A	10/27/1999	<17	NA	**360**
MM31A	10/13/2000	**6.4**	**300**	**300**
MM31A	10/31/2002	**11**	**400**	**240**

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
MM31A	11/5/2003	**8**	**230**	**200**
MM31A	10/13/2004	**11**	**250**	**140**
MM31A	10/14/2005	**12**	**210**	**92**
MM31A	10/13/2006	**6.5**	**120**	**74**
MM31A	10/10/2007	**10**	**180**	**170**
MM31A	10/9/2008	**12**	**200**	**170**
MM31A	10/15/2009	**6.6**	**150**	**140**
MM31A	10/13/2010	**9.8**	**180**	**130**
MM31A	10/12/2011	**9.7**	**190**	**100**
MM31A	10/9/2012	**9.1**	**200**	**82**
MM31A	10/17/2013	**7.7**	**210**	**100**
MM31B1/B2	11/13/1986	<99	**1900**	NA
MM31B1/B2	1/15/1992	<1	NA	**430**
MM31B1/B2	4/22/1992	<50	NA	**440**
MM31B1/B2	7/16/1992	<10	NA	**76**
MM31B1/B2	10/23/1992	<5	NA	**280**
MM31B1/B2	1/29/1993	<100	NA	**1100**
MM31B1/B2	4/15/1993	<10	NA	**220**
MM31B1/B2	7/14/1993	<50	NA	**830**
MM31B1/B2	10/13/1993	<0.5	NA	**600**
MM31B1/B2	1/14/1994	<5	NA	**370**
MM31B1/B2	4/13/1994	<5	NA	**440**
MM31B1/B2	7/14/1994	<5	NA	**270**
MM31B1/B2	10/17/1994	<10	NA	**420**
MM31B1/B2	1/11/1995	<5	NA	**460**
MM31B1/B2	4/12/1995	<10	NA	**450**
MM31B1/B2	7/12/1995	<5	NA	**450**
MM31B1/B2	10/11/1995	<10	NA	**460**
MM31B1/B2	1/17/1996	<10	NA	**670**
MM31B1/B2	4/17/1996	<10	NA	**440**
MM31B1/B2	7/17/1996	<25	NA	**1500**
MM31B1/B2	10/15/1996	<12	NA	**420**
MM31B1/B2	1/15/1997	<5	NA	**330**
MM31B1/B2	10/28/1997	<12	NA	**220**
MM31B1/B2	10/22/1998	<10	NA	**470**
MM31B1/B2	10/27/1999	<20	NA	**380**
MM31B1/B2	10/16/2000	<1	**290**	**280**
MM33A	8/25/1986	<99	**3**	NA
MM33A	11/12/1986	<99	**1**	NA
MM33A	2/4/1987	<99	**2**	NA

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
MM33A	10/21/1992	<1	NA	**86**
MM33A	10/13/1993	<0.5	NA	**190**
MM33A	10/17/1994	<5	NA	**230**
MM33A	10/11/1995	<5	NA	**160**
MM33A	10/16/1996	<5	NA	**190**
MM33A	10/30/1997	<5	NA	**130**
MM33A	10/22/1998	<0.5	NA	**17**
MM33A	10/16/2000	<0.5	**8.2**	**23**
MM33A	10/31/2002	<2.5	**30**	**98**
MM33A	11/6/2003	<1	**15**	**73**
MM33A	10/13/2004	<0.5	**6.1**	**23**
MM33A	10/14/2005	<0.5	**7.7**	**26**
MM33A	10/11/2006	<0.5	**8.3**	**40**
MM33A	10/10/2007	<0.5	**6.7**	**40**
MM33A	10/10/2008	<0.5	**5.1**	**27**
MM33A	10/15/2009	<0.5	**4.5**	**32**
MM33A	10/13/2010	<0.5	**5**	**27**
MM33A	10/11/2011	<0.5	**2.6**	**22**
MM33A	10/9/2012	<0.5	**3.4**	**28**
MM33A	10/17/2013	<0.5	**2.7**	**32**
MM33B2	8/25/1986	<99	**830**	NA
MM33B2	11/12/1986	<99	**1000**	NA
MM33B2	2/20/1987	<99	<99	NA
MM33B2	1/15/1992	<1	NA	**180**
MM33B2	4/24/1992	<50	NA	**95**
MM33B2	7/15/1992	<10	NA	**76**
MM33B2	10/23/1992	<5	NA	**120**
MM33B2	1/29/1993	<50	NA	**110**
MM33B2	4/14/1993	<1	NA	**160**
MM33B2	7/15/1993	<10	NA	**86**
MM33B2	10/13/1993	<0.5	NA	**71**
MM33B2	1/14/1994	<5	NA	**29**
MM33B2	4/13/1994	<0.5	NA	**40**
MM33B2	7/13/1994	<5	NA	**200**
MM33B2	10/14/1994	<2.5	NA	**170**
MM33B2	1/11/1995	<2.5	NA	**110**
MM33B2	4/11/1995	<10	NA	**28**
MM33B2	7/12/1995	<2.5	NA	**86**
MM33B2	10/11/1995	<5	NA	**110**
MM33B2	1/17/1996	<2.5	NA	**110**

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
MM33B2	4/17/1996	<5	NA	**130**
MM33B2	7/17/1996	<2.5	NA	**86**
MM33B2	10/16/1996	<5	NA	**72**
MM33B2	1/15/1997	<2.5	NA	**66**
MM33B2	10/30/1997	<5	NA	**35**
MM33B2	10/22/1998	<2.5	NA	**77**
MM33B2	10/27/1999	<7.1	NA	**68**
MM33B2	10/13/2000	<0.5	**23**	**9**
MM33B2	10/31/2002	<5	**190**	**58**
MM33B2	11/6/2003	<1	**81**	**51**
MM33B2	10/13/2004	<0.5	**22**	**9**
MM33B2	10/14/2005	<0.5	**140**	**52**
MM33B2	10/12/2006	<0.5	**94**	**30**
MM33B2	10/11/2007	<0.5	**21**	**6.9**
MM33B2	10/6/2008	<0.5	**19**	**7.1**
MM33B2	10/9/2009	<0.5	**46**	**14**
MM33B2	10/13/2010	<0.5	**6.3**	**1.4**
MM33B2	10/11/2011	<0.5	**3.7**	**0.71**
MM33B2	10/9/2012	<0.5	**18**	**5.4**
MM33B2	10/17/2013	<0.5	**4.1**	**1**
MM34A	9/5/1986	<99	**24**	NA
MM34A	11/13/1986	<99	**4**	NA
MM34A	2/4/1987	<99	**4**	NA
MM34A	2/16/1988	<99	**8**	NA
MM34A	5/12/1988	<99	**12**	NA
MM34A	1/15/1992	**3.3**	NA	**46**
MM34A	4/22/1992	**2.9**	NA	**100**
MM34A	7/16/1992	<10	NA	**91**
MM34A	10/21/1992	**7.8**	NA	**240**
MM34A	1/29/1993	<10	NA	**41**
MM34A	4/15/1993	<4	NA	**40**
MM34A	7/15/1993	<50	NA	**89**
MM34A	10/13/1993	**6.6**	NA	**270**
MM34A	1/13/1994	<5	NA	**200**
MM34A	4/13/1994	**7.1**	NA	**350**
MM34A	7/14/1994	**6.8**	NA	**410**
MM34A	10/14/1994	<10	NA	**580**
MM34A	1/10/1995	**1.5**	NA	**76**
MM34A	4/11/1995	<10	NA	**200**
MM34A	7/11/1995	<5	NA	**260**

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
MM34A	10/11/1995	<2.5	NA	**250**
MM34A	1/16/1996	<2.5	NA	**140**
MM34A	4/16/1996	<5	NA	**340**
MM34A	7/17/1996	<10	NA	**380**
MM34A	10/16/1996	<10	NA	**450**
MM34A	1/15/1997	**4.3**	NA	**180**
MM34A	10/30/1997	<10	NA	**460**
MM34A	10/27/1999	<7.1	NA	**150**
MM34A	1/6/2000	<7.1	NA	**150**
MM34A	10/12/2000	**2.1**	**83**	**180**
MM34A	10/31/2002	<5	**71**	**120**
MM34A	11/5/2003	**1.5**	**67**	**140**
MM34A	10/12/2004	<1.3	**54**	**150**
MM34A	10/14/2005	<1	**42**	**110**
MM34A	10/11/2006	**2.1**	**79**	**120**
MM34A	10/10/2007	**0.9**	**39**	**62**
MM34A	10/7/2008	**1.1**	**48**	**84**
MM34A	10/14/2009	**0.7**	**34**	**47**
MM34A	10/12/2010	<0.5	**10**	**69**
MM34A	10/11/2011	<0.5	**16**	**26**
MM34A	10/10/2012	**1.1**	**44**	**95**
MM34A	10/15/2013	**1.4**	**60**	**92**
MM36A	9/5/1986	**21**	**570**	NA
MM36A	11/11/1986	**6**	**320**	NA
MM36A	2/6/1987	<99	**260**	NA
MM36A	5/13/1988	<99	**600**	NA
MM36A	4/23/1992	<50	NA	**390**
MM36A	10/22/1992	<10	NA	**240**
MM36A	4/15/1993	<10	NA	**460**
MM36A	10/13/1993	**5.6**	NA	**490**
MM36A	4/12/1994	**6.1**	NA	**350**
MM36A	10/17/1994	<5	NA	**340**
MM36A	4/11/1995	<10	NA	**300**
MM36A	10/10/1995	**5.2**	NA	**46**
MM36A	4/16/1996	<10	NA	**430**
MM36A	10/16/1996	<10	NA	**410**
MM36A	10/29/1997	<10	NA	**620**
MM36A	4/15/1998	<12	NA	**350**
MM36A	10/22/1998	<5	NA	**460**
MM36A	10/16/2000	**4.5**	**230**	**360**

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
MM37A	12/10/1986	<99	**360**	NA
MM37A	2/4/1987	<99	**610**	NA
MM37A	2/18/1988	<99	**630**	NA
MM37A	1/15/1992	<1	NA	**290**
MM37A	7/16/1992	<50	NA	**670**
MM37A	1/29/1993	<200	NA	**920**
MM37A	4/15/1993	<10	NA	**420**
MM37A	7/15/1993	<50	NA	**250**
MM37A	1/14/1994	<5	NA	**420**
MM37A	7/14/1994	<5	NA	**410**
MM37A	1/10/1995	<5	NA	**240**
MM37A	7/12/1995	<5	NA	**350**
MM37A	1/16/1996	<5	NA	**290**
MM37A	7/16/1996	<5	NA	**390**
MM37A	1/14/1997	<5	NA	**260**
MM37A	10/28/1997	<5	NA	**110**
MM37A	10/27/1999	<7.1	NA	**180**
MM37A	10/13/2000	<1	**210**	**280**
MM37A	10/31/2002	<10	**300**	**250**
MM37A	11/5/2003	<2.5	**180**	**230**
MM37A	10/13/2004	<1.7	**200**	**210**
MM37A	10/12/2005	<1.3	**190**	**130**
MM37A	10/10/2006	<0.5	**240**	**150**
MM37A	10/11/2007	<2.5	**250**	**120**
MM37A	10/8/2008	<2.5	**290**	**98**
MM37A	10/14/2009	<2.5	**240**	**100**
MM37A	10/12/2010	<1.3	**170**	**60**
MM37A	10/11/2011	**1**	**220**	**72**
MM37A	10/9/2012	<1.3	**210**	**65**
MM37A	10/17/2013	<1.3	**220**	**65**
MM40A	2/17/1988	<99	**180**	NA
MM40A	5/12/1988	<99	**180**	NA
MM40A	1/16/1992	<10	NA	<10
MM40A	4/24/1992	<50	NA	**240**
MM40A	7/16/1992	<10	NA	**81**
MM40A	10/22/1992	<5	NA	**110**
MM40A	1/29/1993	<100	NA	**700**
MM40A	4/14/1993	<10	NA	**280**
MM40A	7/15/1993	<10	NA	**290**
MM40A	10/13/1993	<2.5	NA	**260**

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

Well ID	Date	PCE	TCE	cDCE
MM40A	1/13/1994	<5	NA	**150**
MM40A	4/13/1994	<2.5	NA	**160**
MM40A	7/14/1994	<2.5	NA	**200**
MM40A	10/14/1994	<5	NA	**340**
MM40A	1/10/1995	<0.5	NA	**0.8**
MM40A	4/11/1995	<10	NA	**450**
MM40A	7/11/1995	<5	NA	**230**
MM40A	10/11/1995	**0.9**	NA	**76**
MM40A	1/16/1996	<5	NA	**230**
MM40A	4/17/1996	<5	NA	**210**
MM40A	7/17/1996	<5	NA	**240**
MM40A	10/16/1996	<5	NA	**270**
MM40A	1/15/1997	<5	NA	**280**
MM40A	10/30/1997	<10	NA	**340**
MM40A	10/23/1998	<5	NA	**180**
MM40A	10/27/1999	<8.3	NA	**290**
MM40A	10/13/2000	**2**	**100**	**250**
MM40A	11/1/2002	<10	**150**	**340**
MM40A	11/6/2003	<5	**130**	**410**
MM40A	10/12/2004	<1.7	**74**	**200**
MM40A	10/14/2005	<1.3	**83**	**170**
MM40A	10/11/2006	**2.3**	**110**	**180**
MM40A	10/10/2007	**0.7**	**39**	**74**
MM40A	10/7/2008	<0.5	**24**	**62**
MM40A	10/14/2009	<0.5	**17**	**59**
MM40A	10/12/2010	<0.5	**23**	**87**
MM40A	10/11/2011	<0.5	**1.5**	**14**
MM40A	10/9/2012	<0.5	**21**	**61**
MM40A	10/15/2013	<0.5	**19**	**89**
MW18AR	10/11/2007	**21**	**200**	**130**
MW18AR	10/8/2008	**28**	**230**	**110**
MW18AR	10/16/2009	**22**	**190**	**120**
MW18AR	10/12/2010	**19**	**160**	**98**
MW18AR	10/11/2011	**18**	**150**	**99**
MW18AR	10/9/2012	**16**	**130**	**85**
MW18AR	10/16/2013	**17**	**130**	**90**

Notes:
1. "<" indicates the compound was not detected at or above the laboratory reporting limit shown.

APPENDIX B
HISTORICAL GROUNDWATER MONITORING RESULTS
1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

Concentrations reported in micrograms per liter (µg/L)

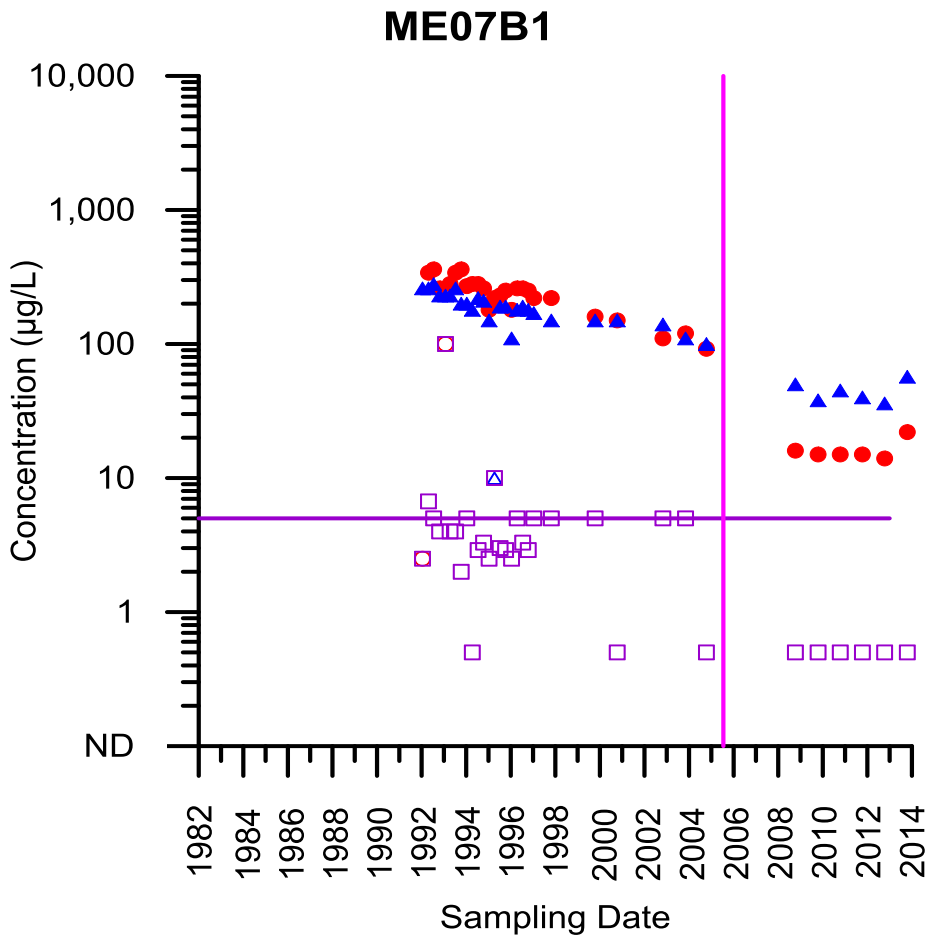
Well ID	Date	PCE	TCE	cDCE

2. Results in **bold** indicate the compound was detected in the sample.
3. "NA" indicates the result is not available.

Abbreviations
PCE = tetrachloroethene
TCE = trichloroethene
cDCE = cis-1,2-dichloroethene

APPENDIX C

Concentration Trends



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

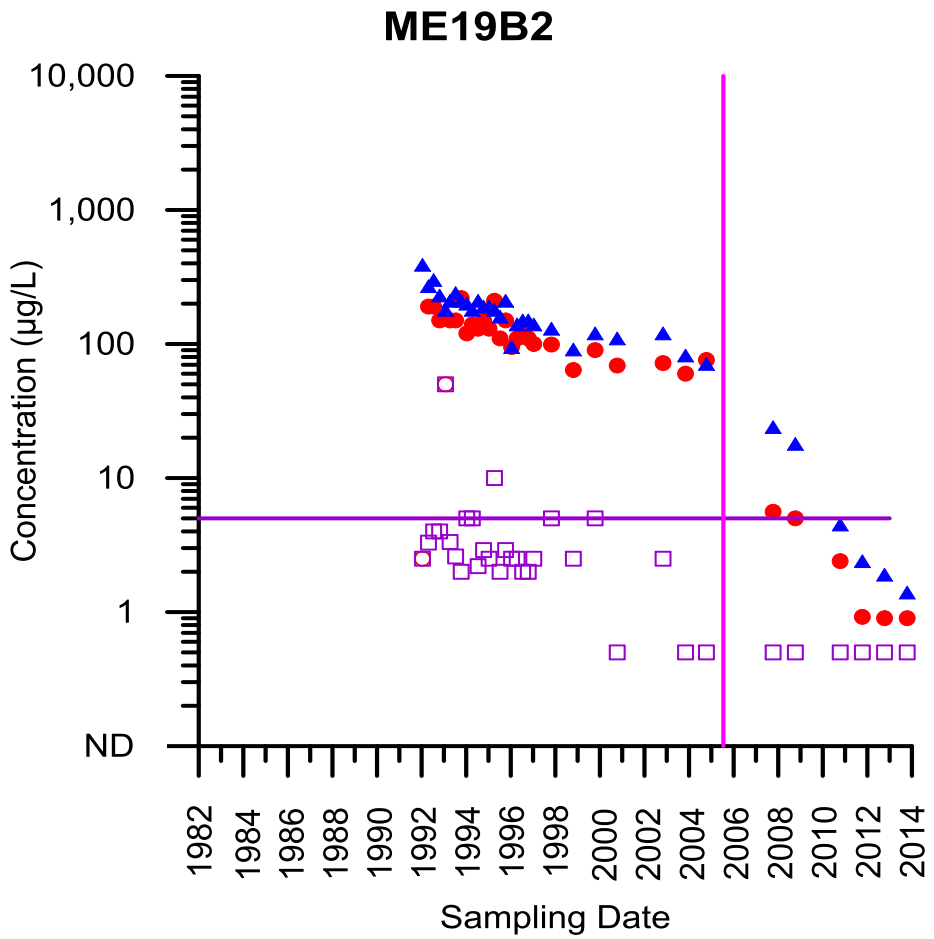
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL ME07B1

JANUARY 2014

FIGURE C-1



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

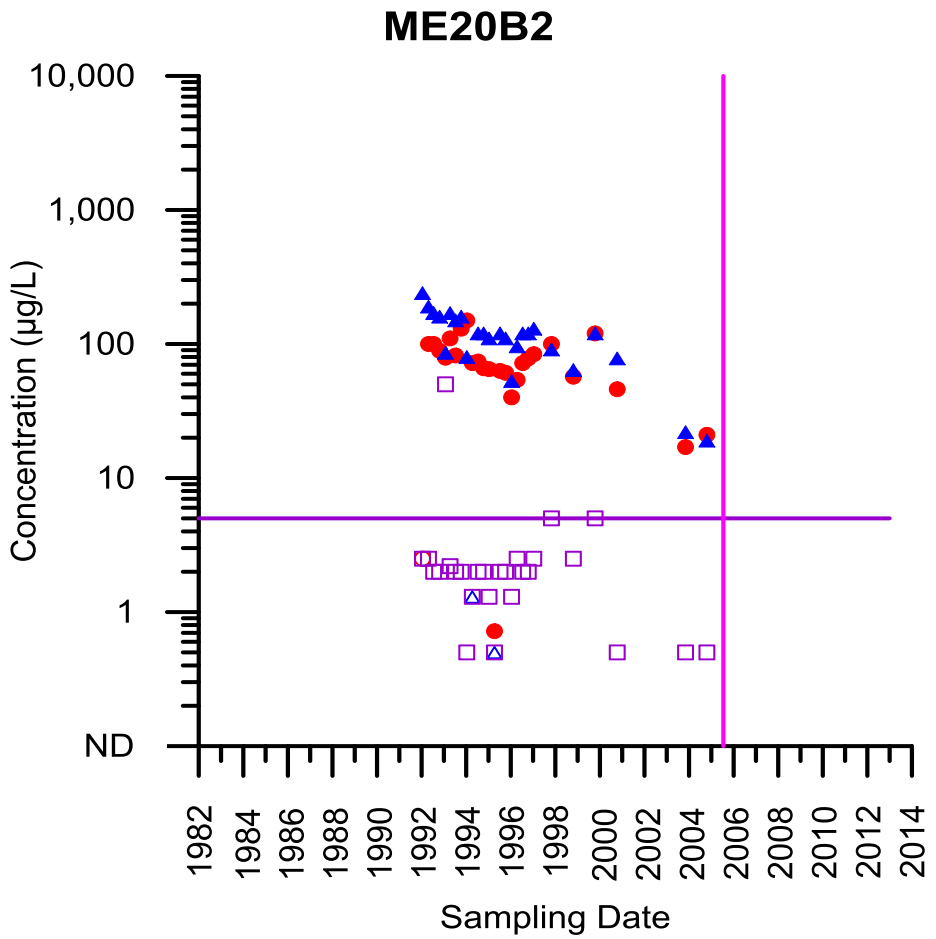
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL ME19B2

JANUARY 2014

FIGURE C-2



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

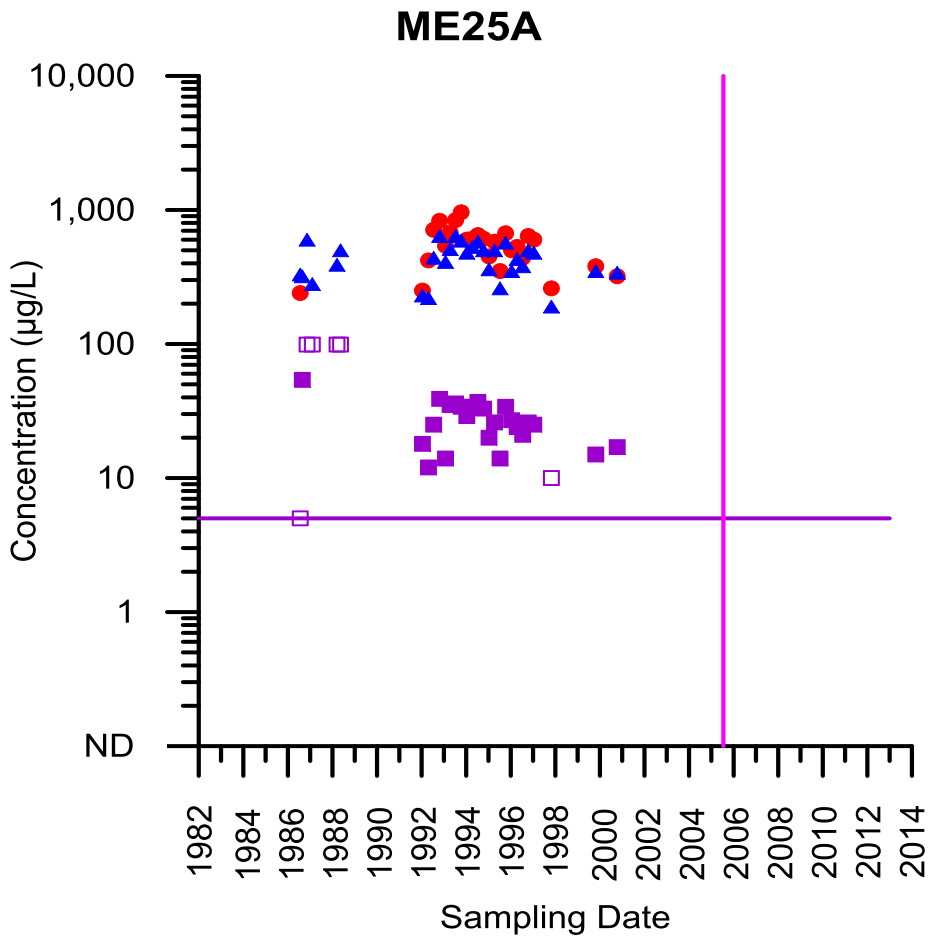
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL ME20B2

JANUARY 2014

FIGURE C-3



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

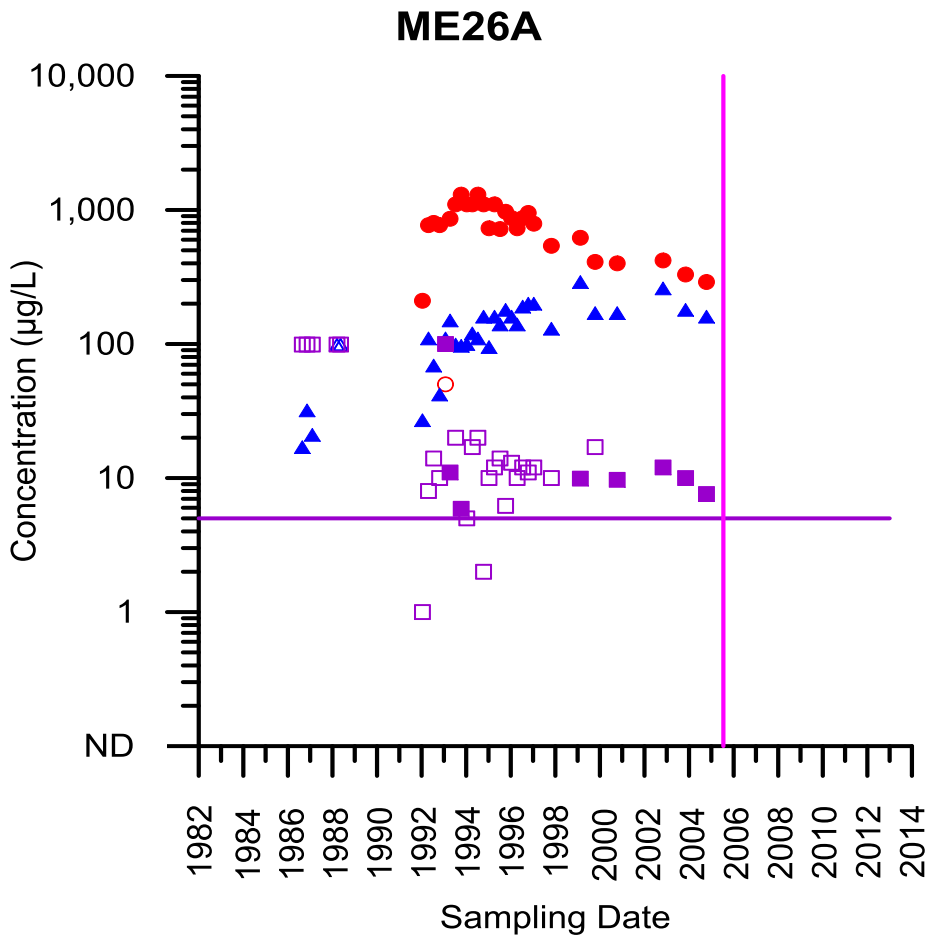
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL ME25A

JANUARY 2014

FIGURE C-4



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

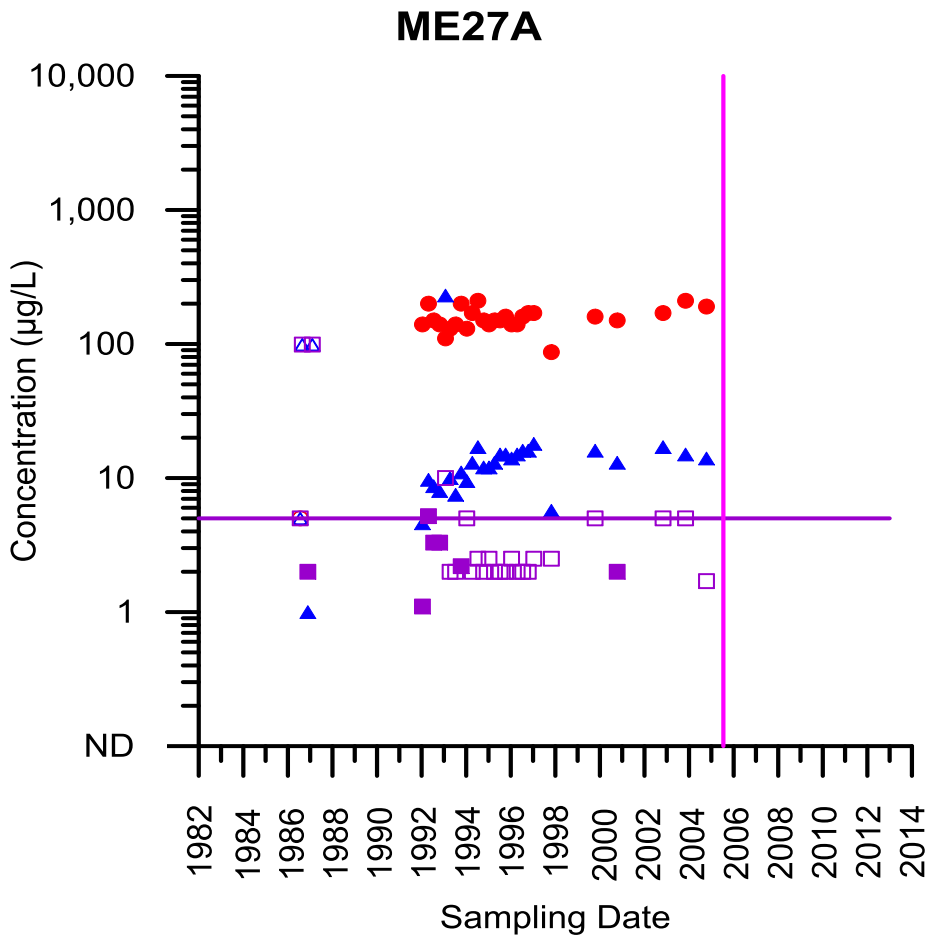
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL ME26A

JANUARY 2014

FIGURE C-5



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

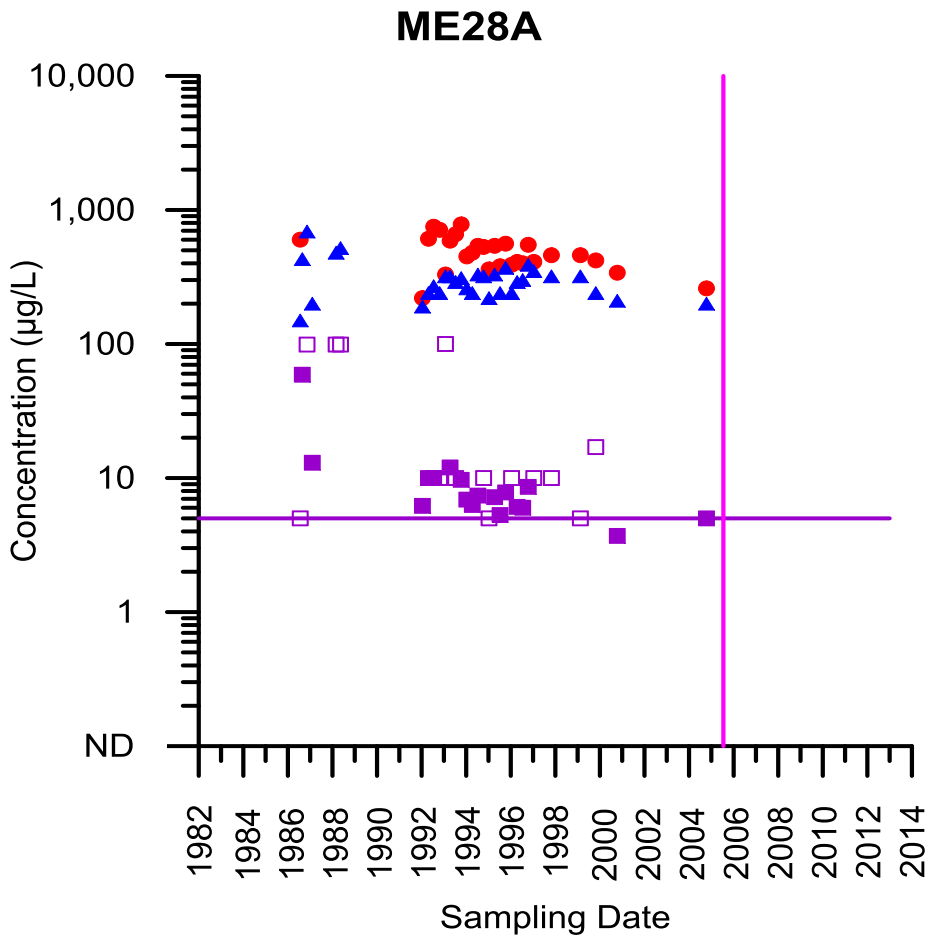
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL ME27A

JANUARY 2014

FIGURE C-6



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

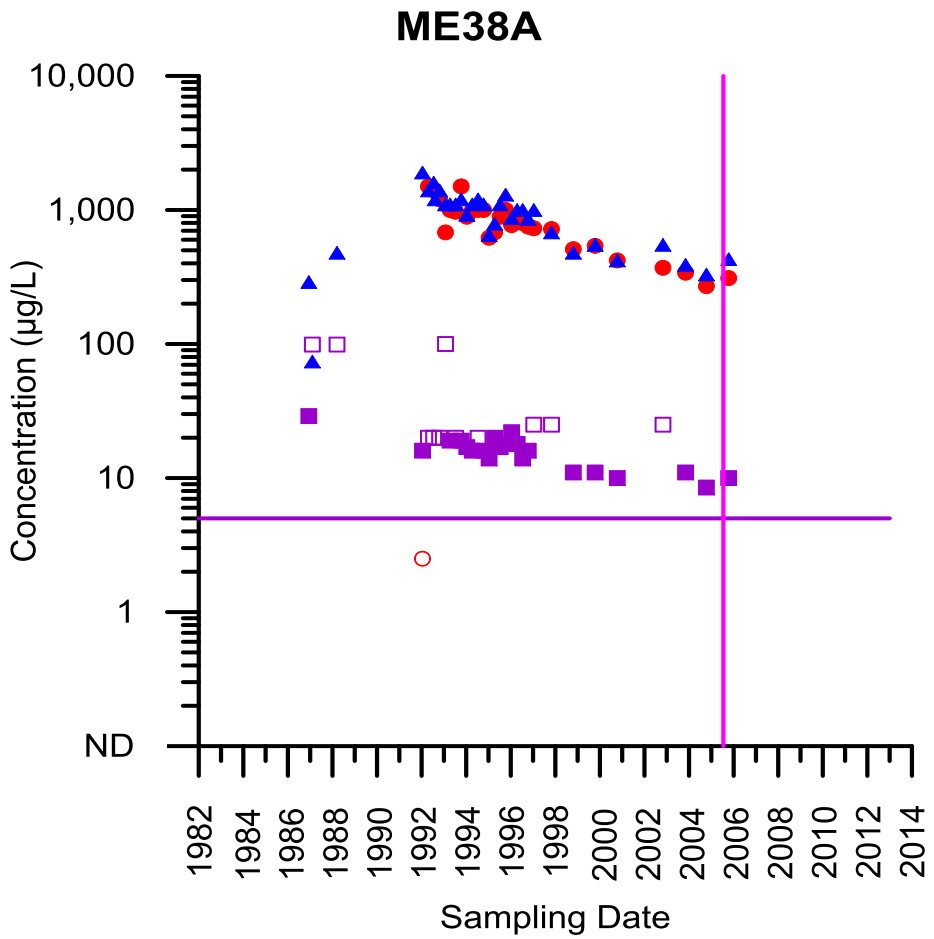
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL ME28A

JANUARY 2014

FIGURE C-7



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

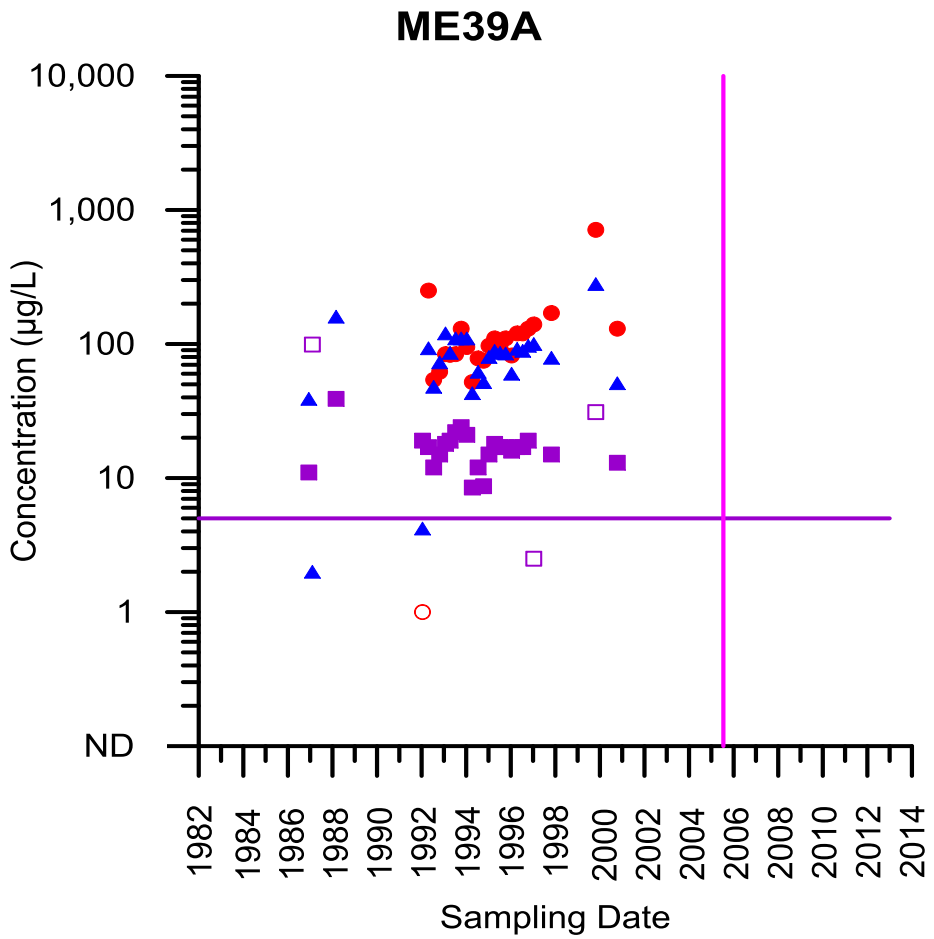
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL ME38A

JANUARY 2014

FIGURE C-8



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

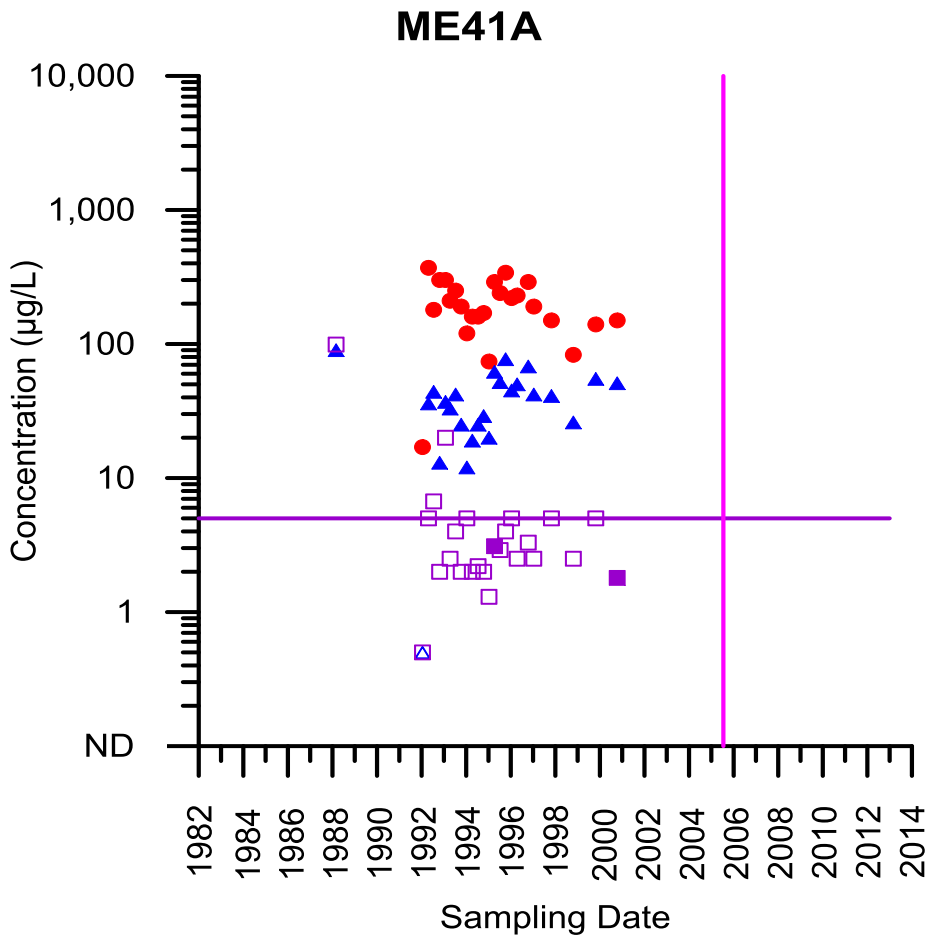
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL ME39A

JANUARY 2014

FIGURE C-9



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

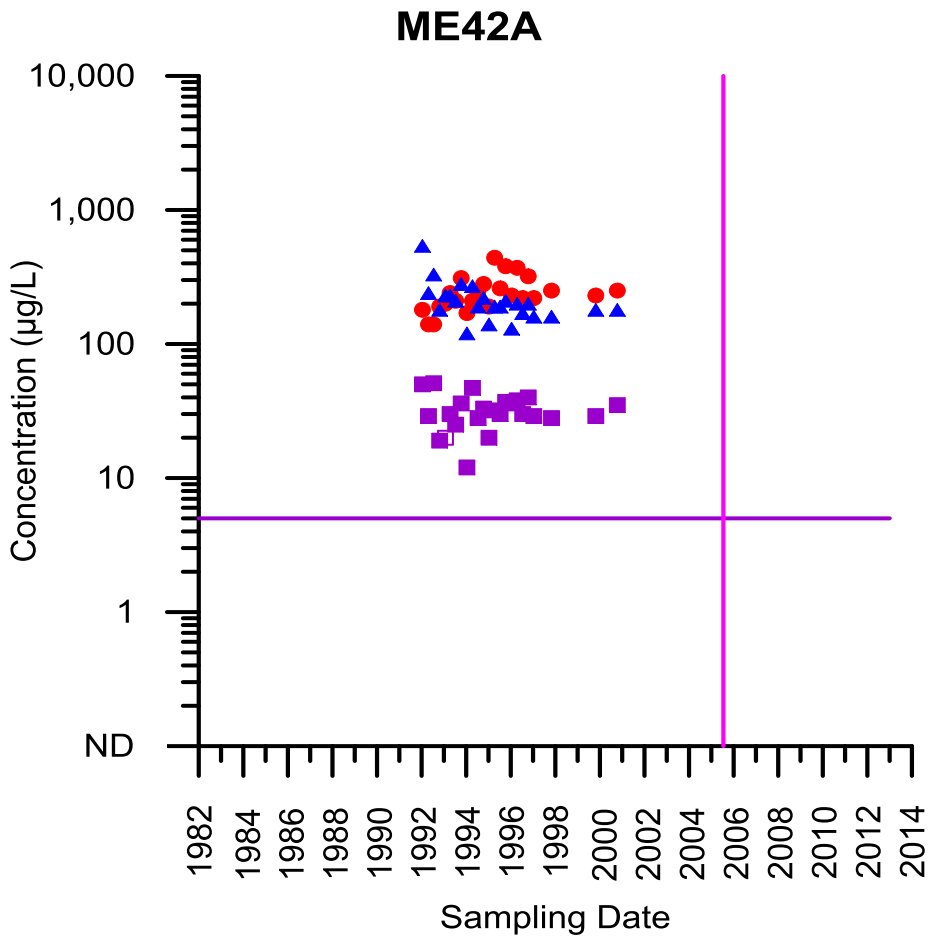
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL ME41A

JANUARY 2014

FIGURE C-10



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

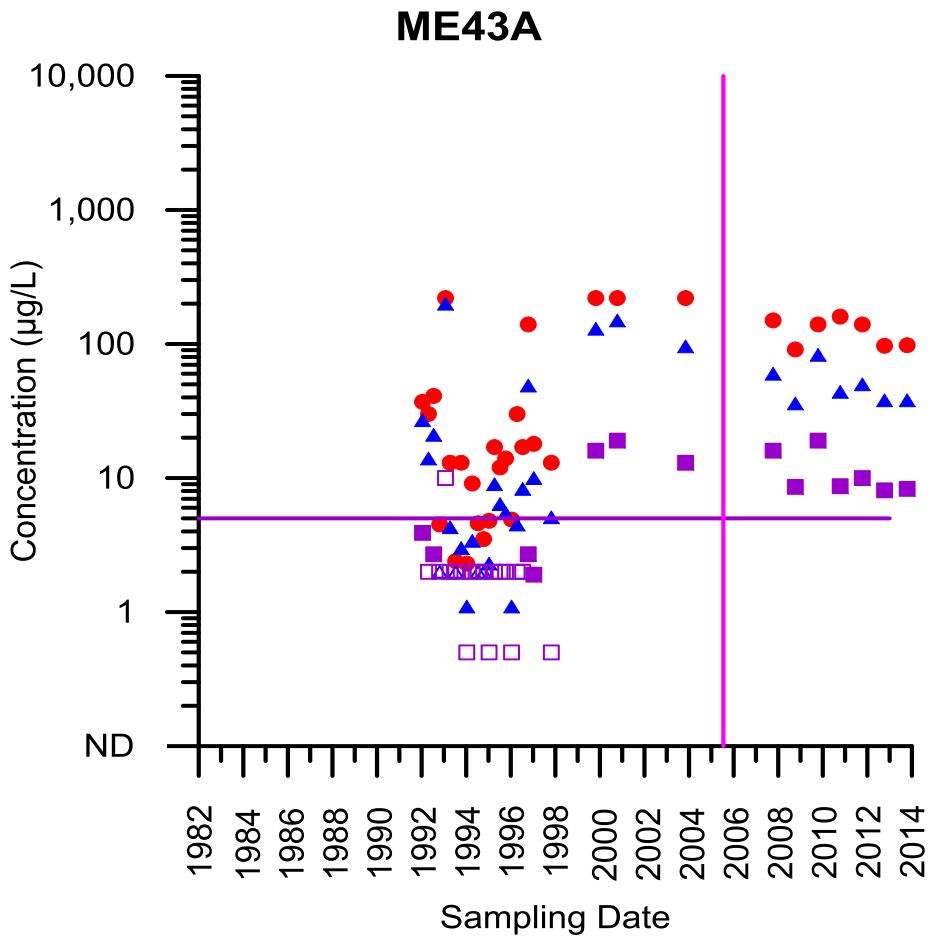
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL ME42A

JANUARY 2014

FIGURE C-11



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

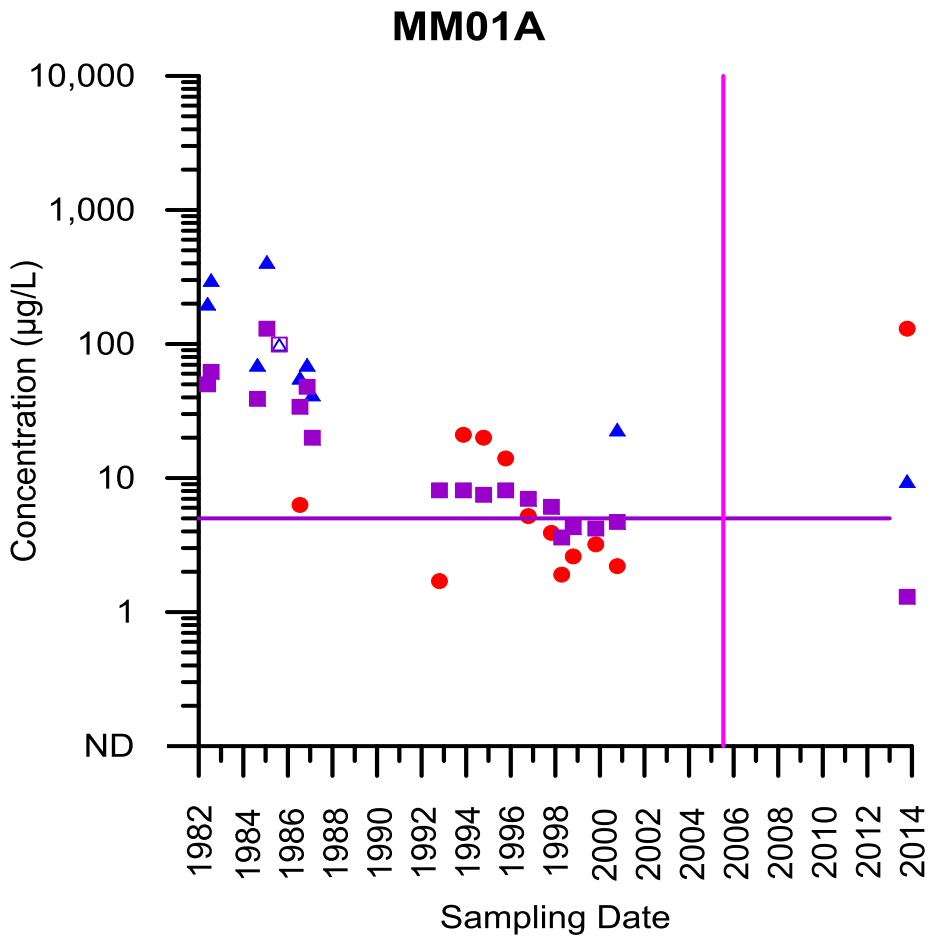
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL ME43A

JANUARY 2014

FIGURE C-12



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

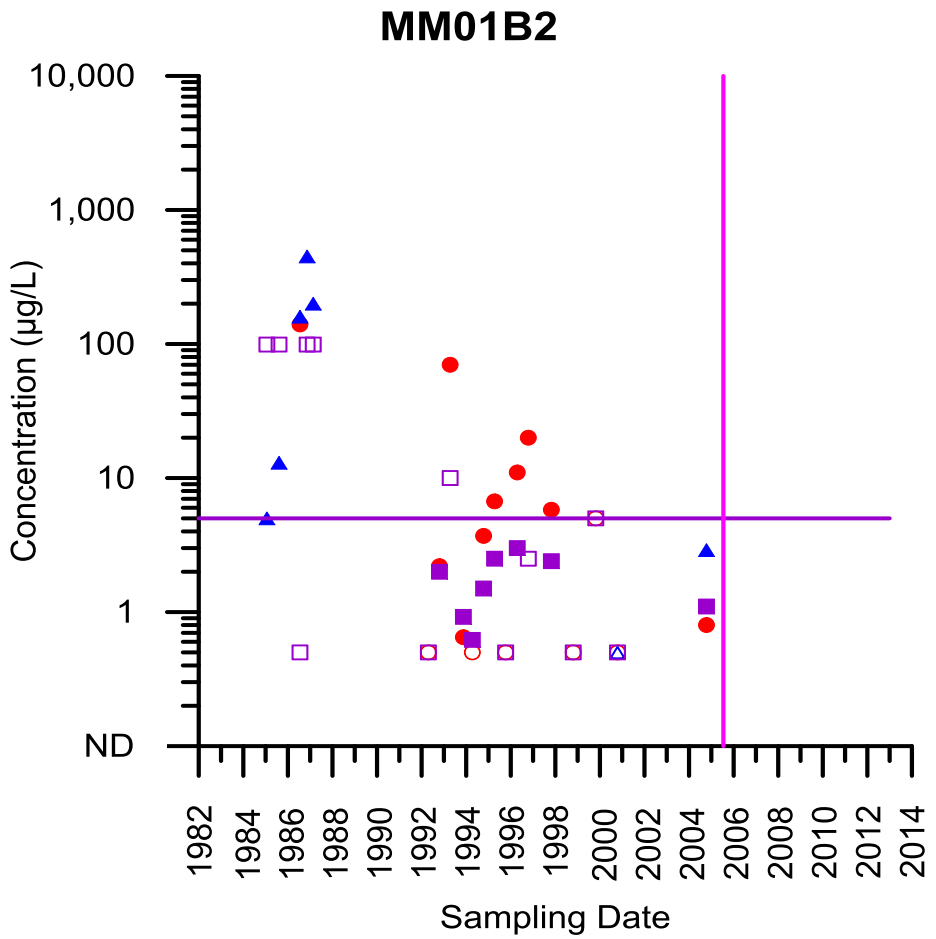
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM01A

JANUARY 2014

FIGURE C-13



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

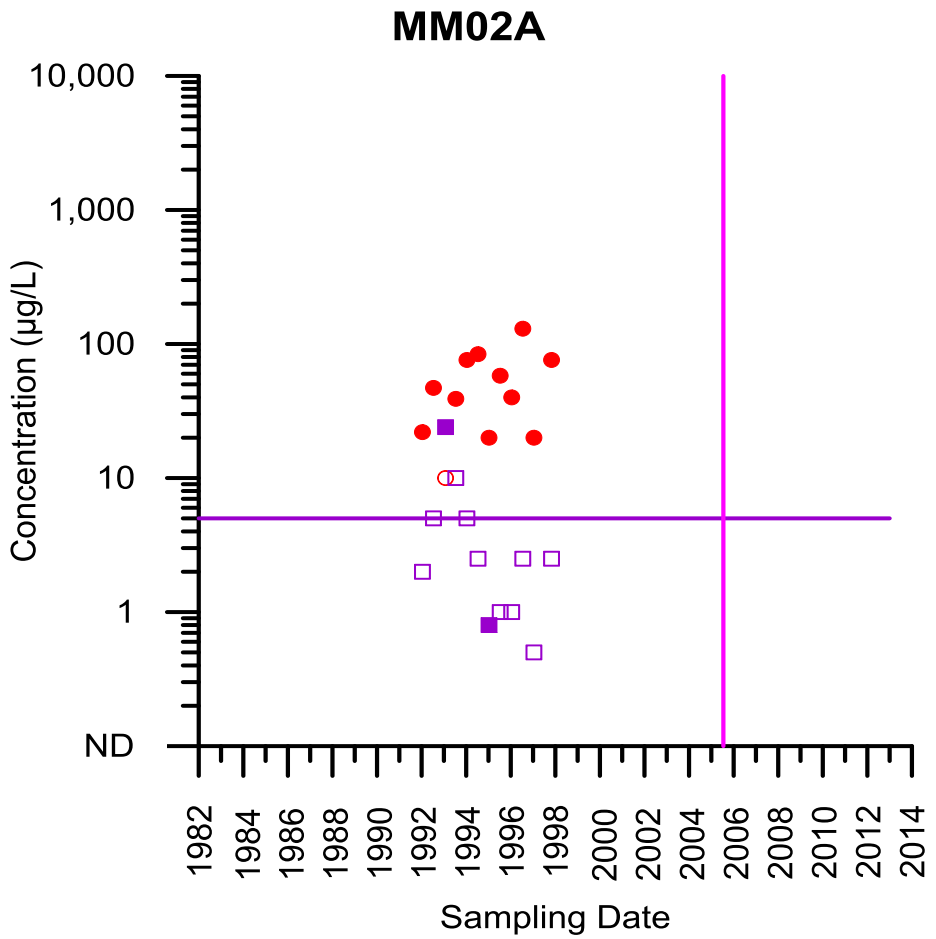
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM01B2

JANUARY 2014

FIGURE C-14



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

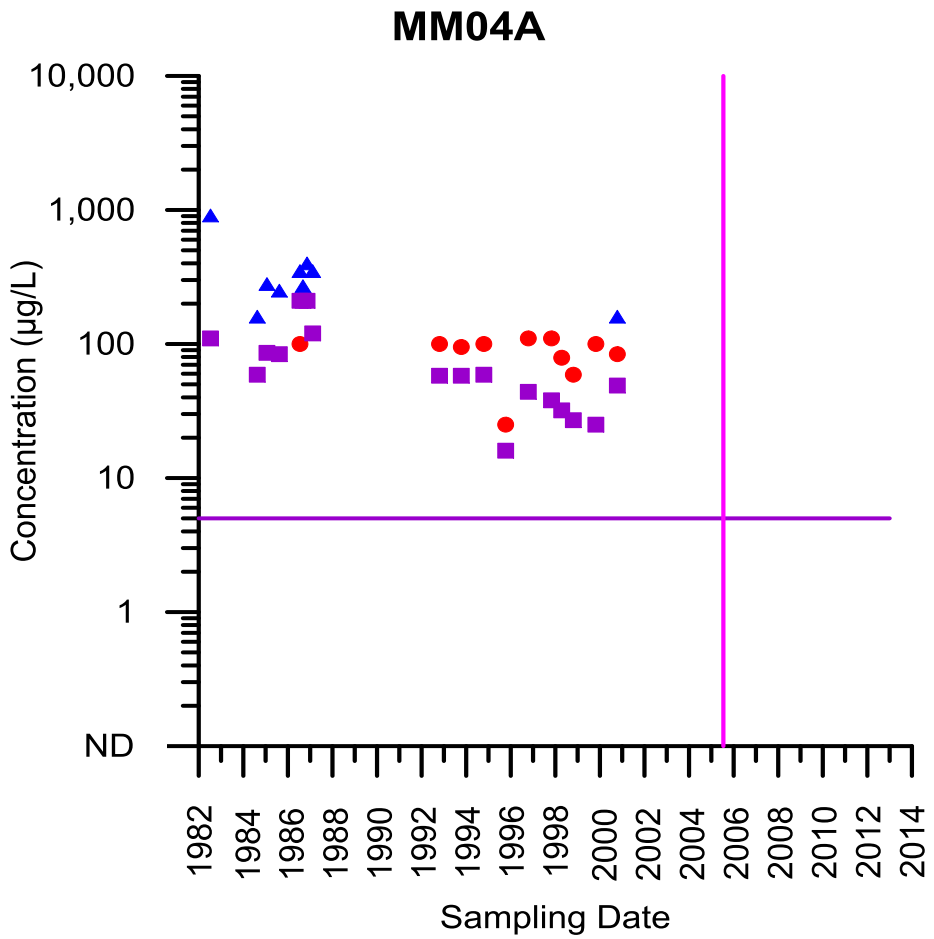
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM02A

JANUARY 2014

FIGURE C-15



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

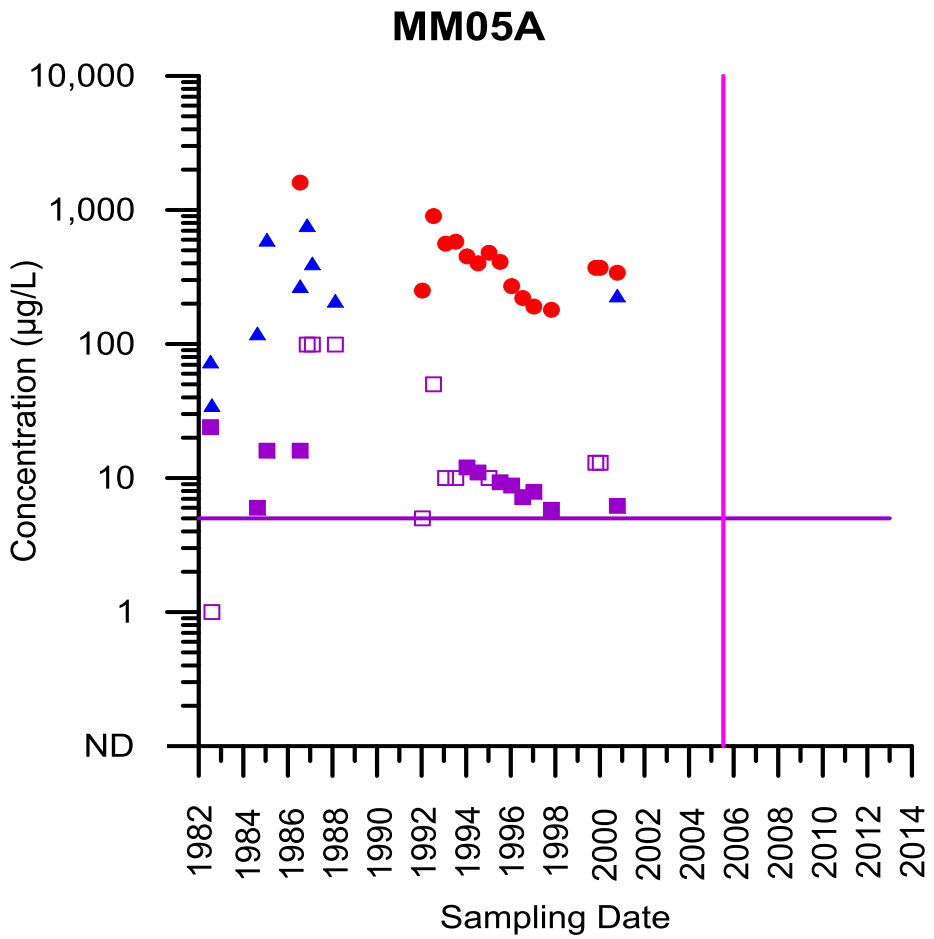
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM04A

JANUARY 2014

FIGURE C-16



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

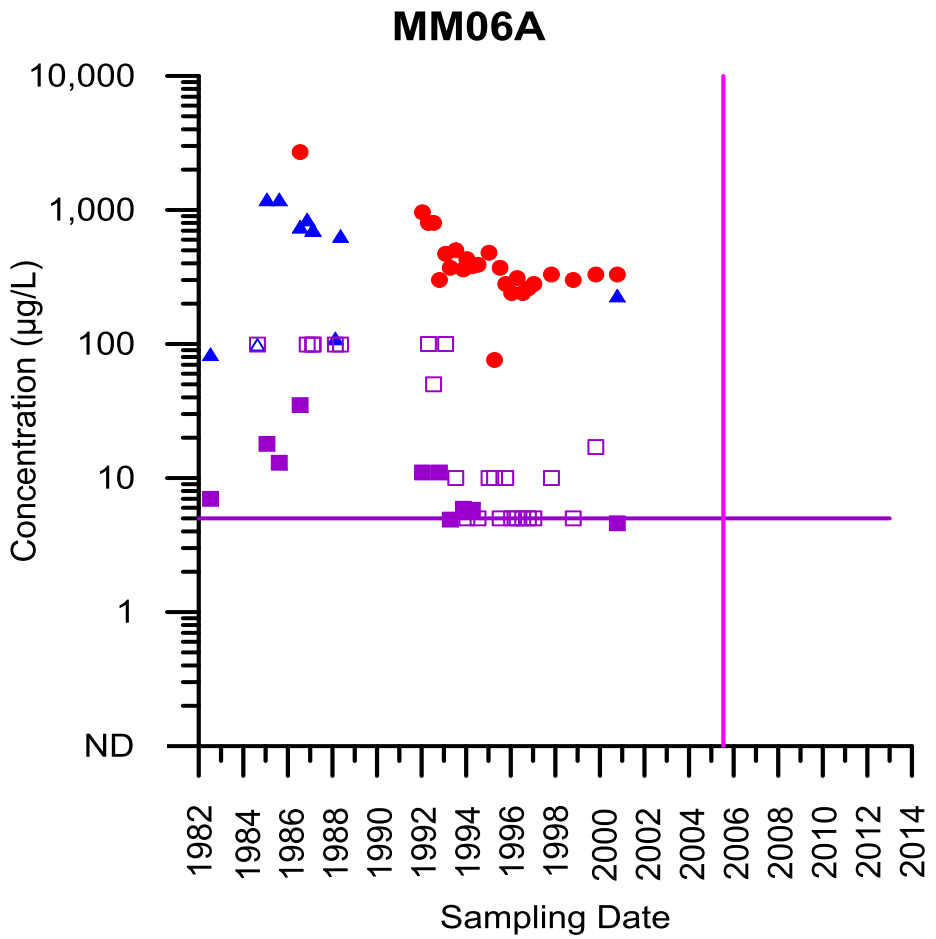
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM05A

JANUARY 2014

FIGURE C-17



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

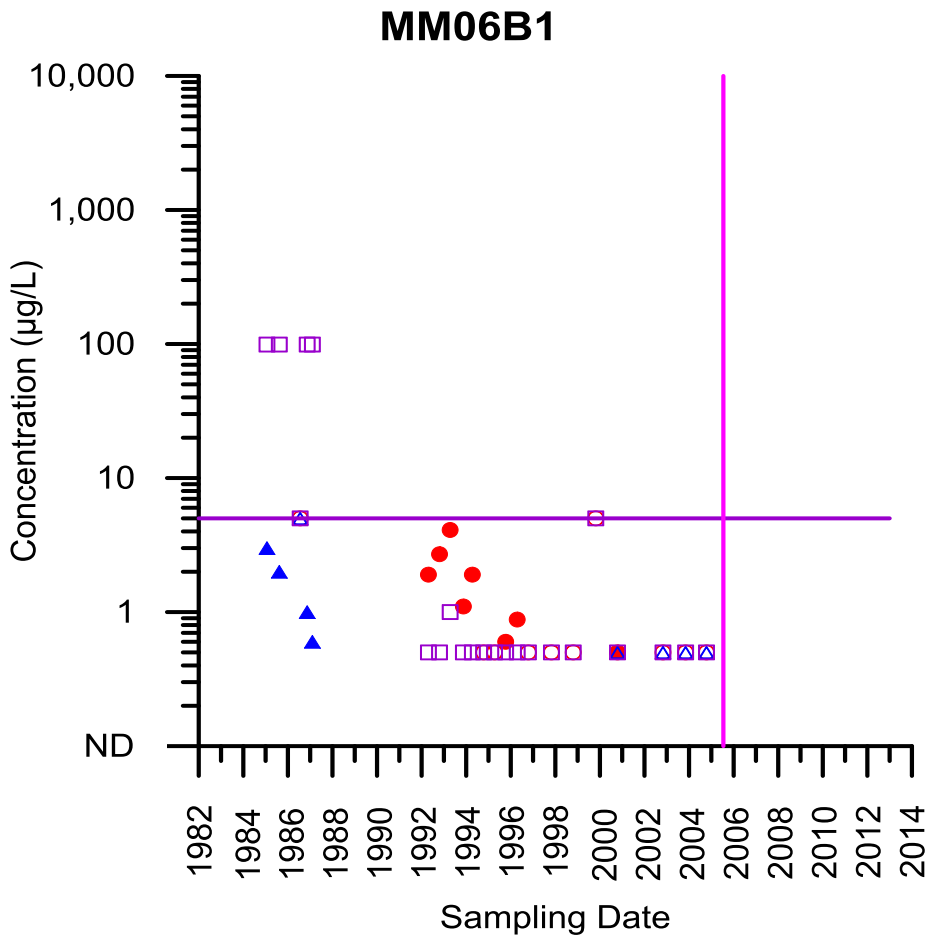
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM06A

JANUARY 2014

FIGURE C-18



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

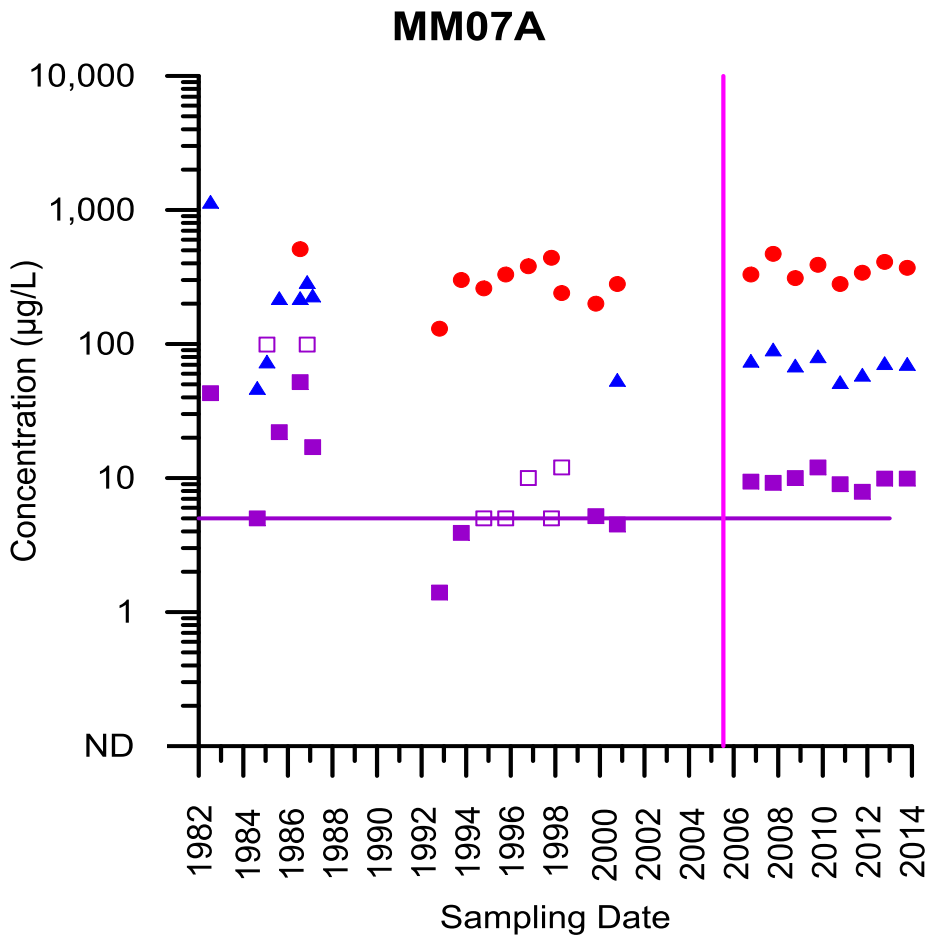
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM06B1

JANUARY 2014

FIGURE C-19



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

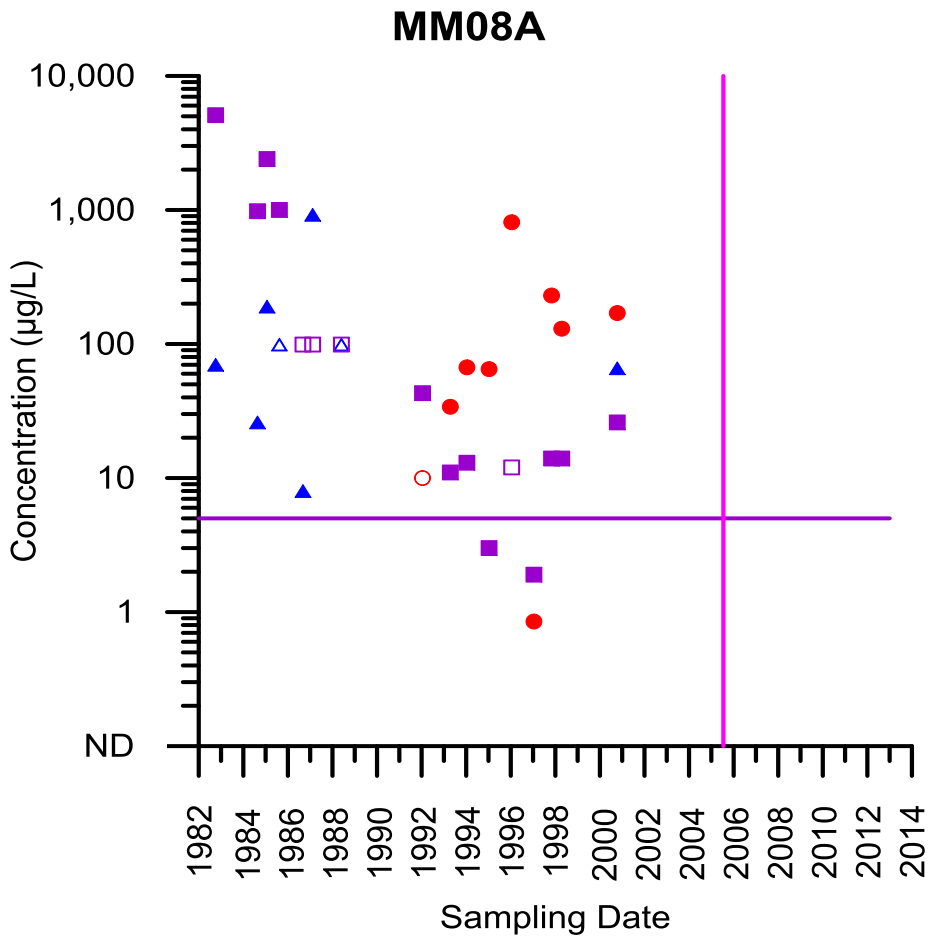
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM07A

JANUARY 2014

FIGURE C-20



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

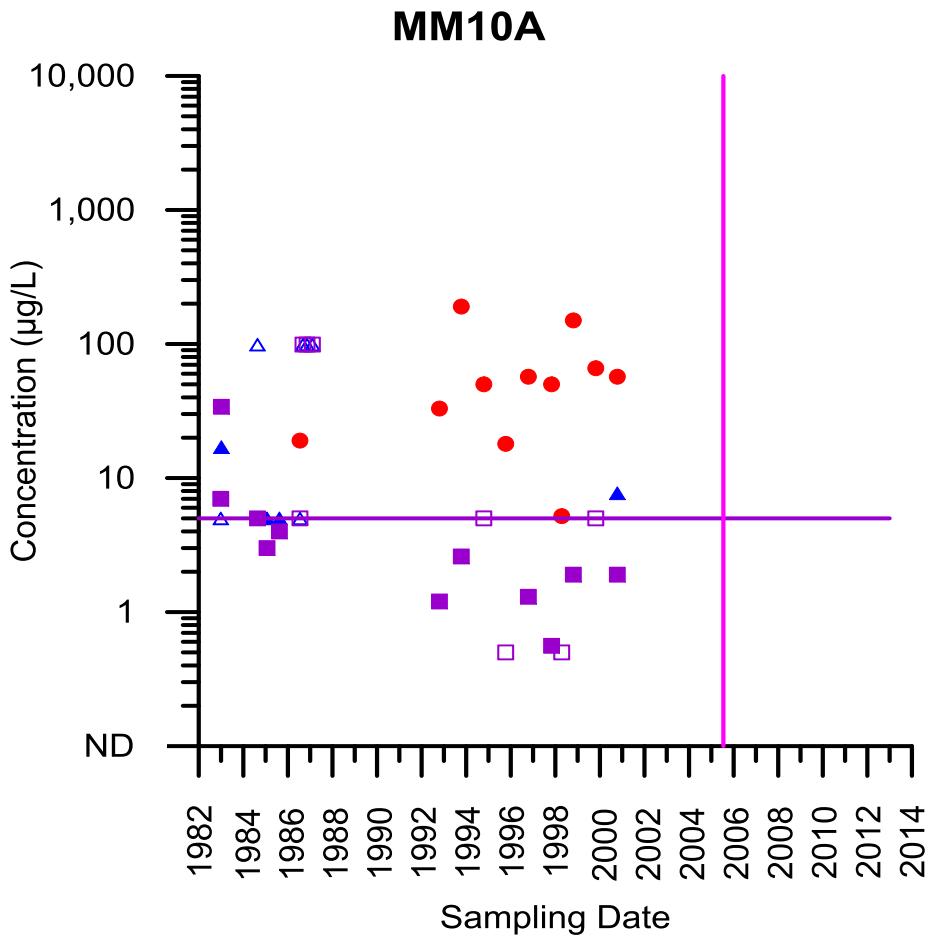
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM08A

JANUARY 2014

FIGURE C-21



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

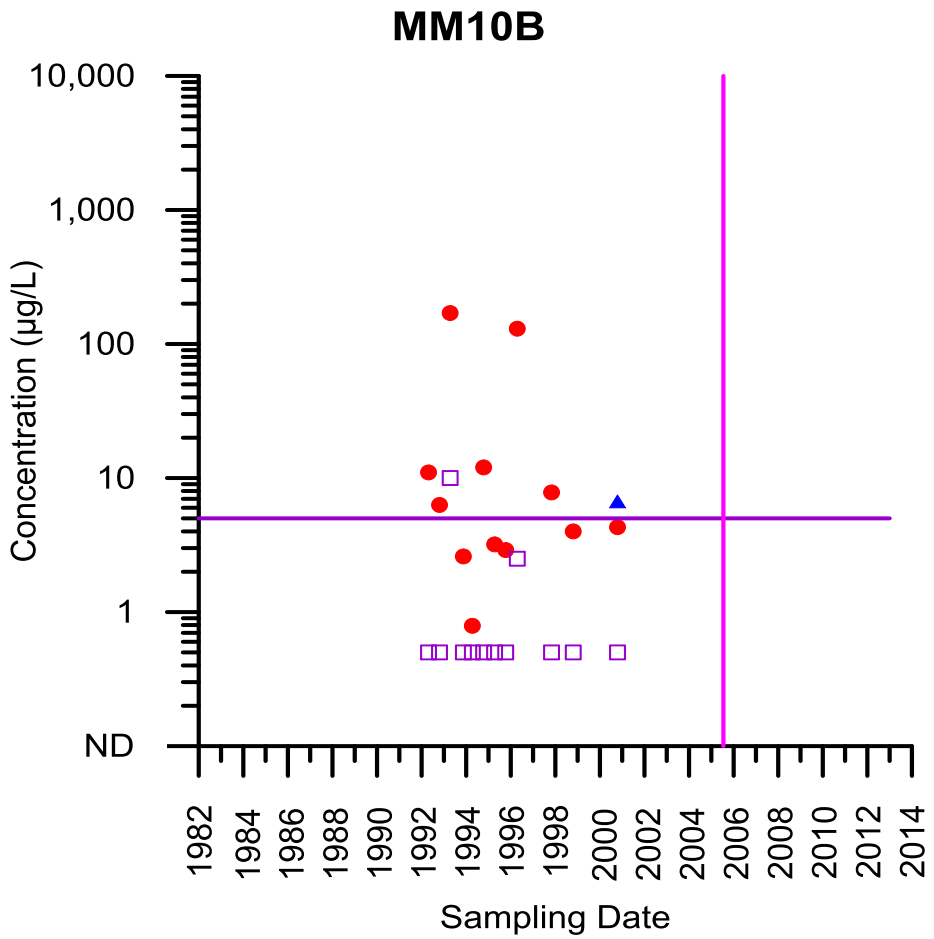
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM10A

JANUARY 2014

FIGURE C-22



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

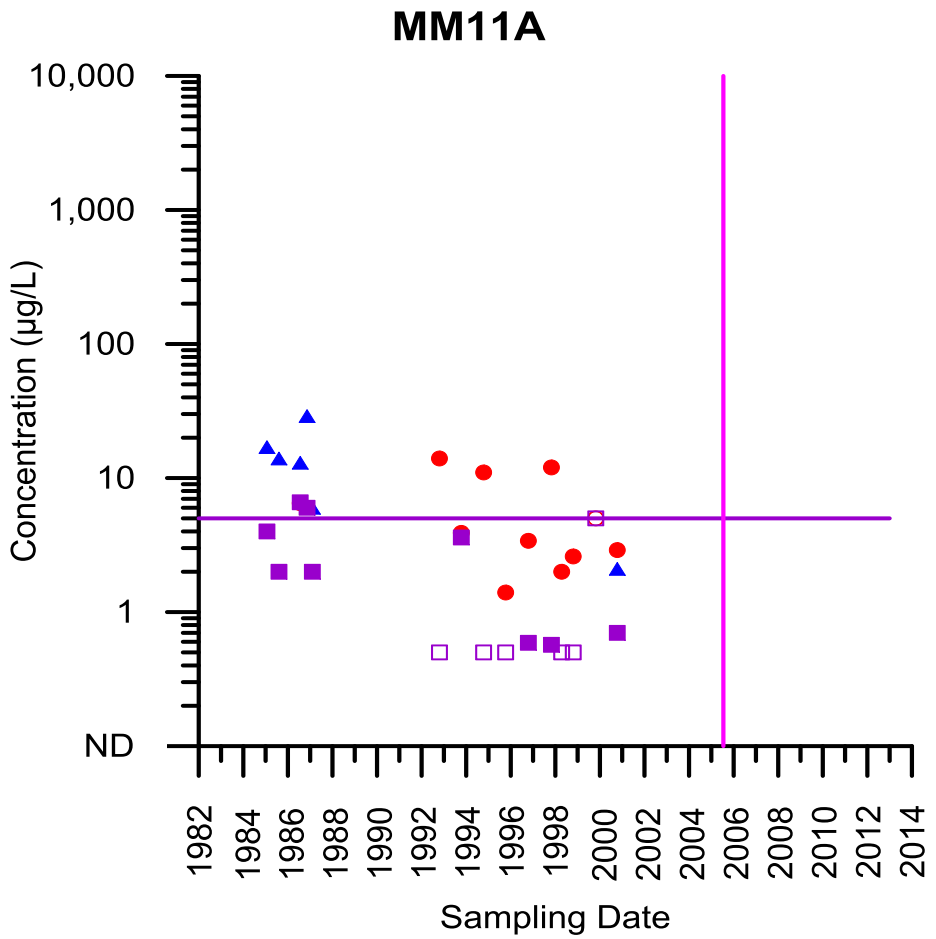
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM10B

JANUARY 2014

FIGURE C-23



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

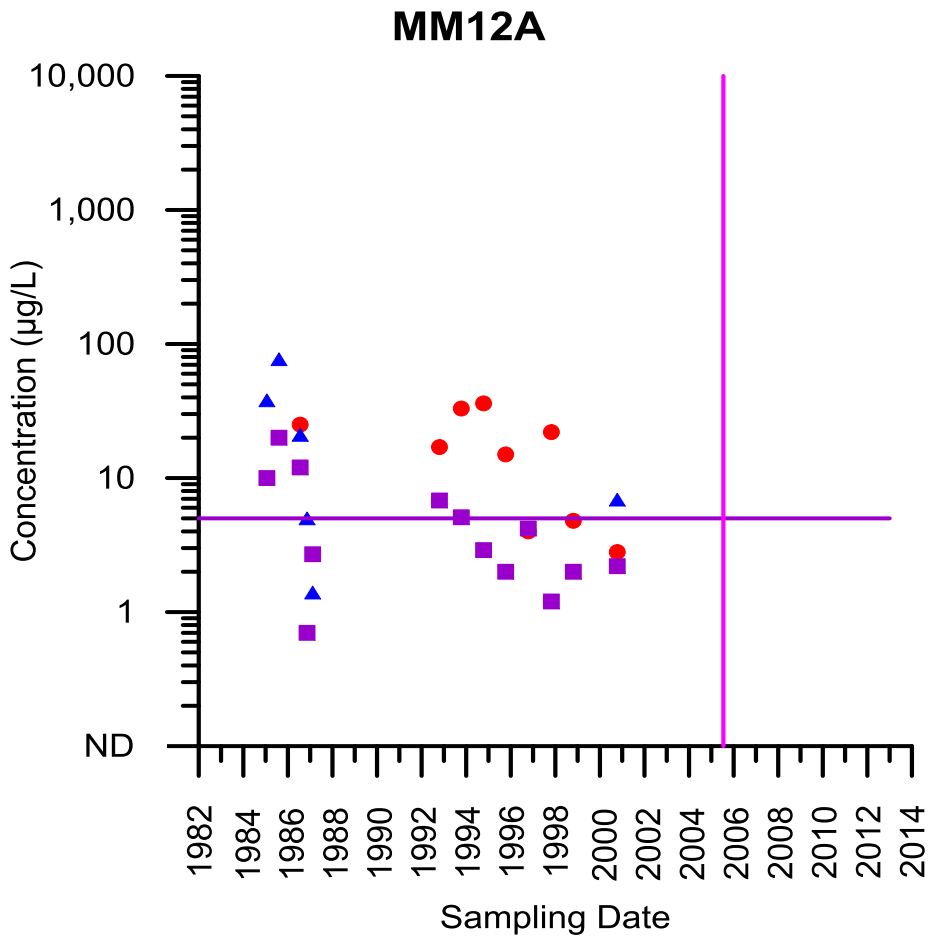
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM11A

JANUARY 2014

FIGURE C-24



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

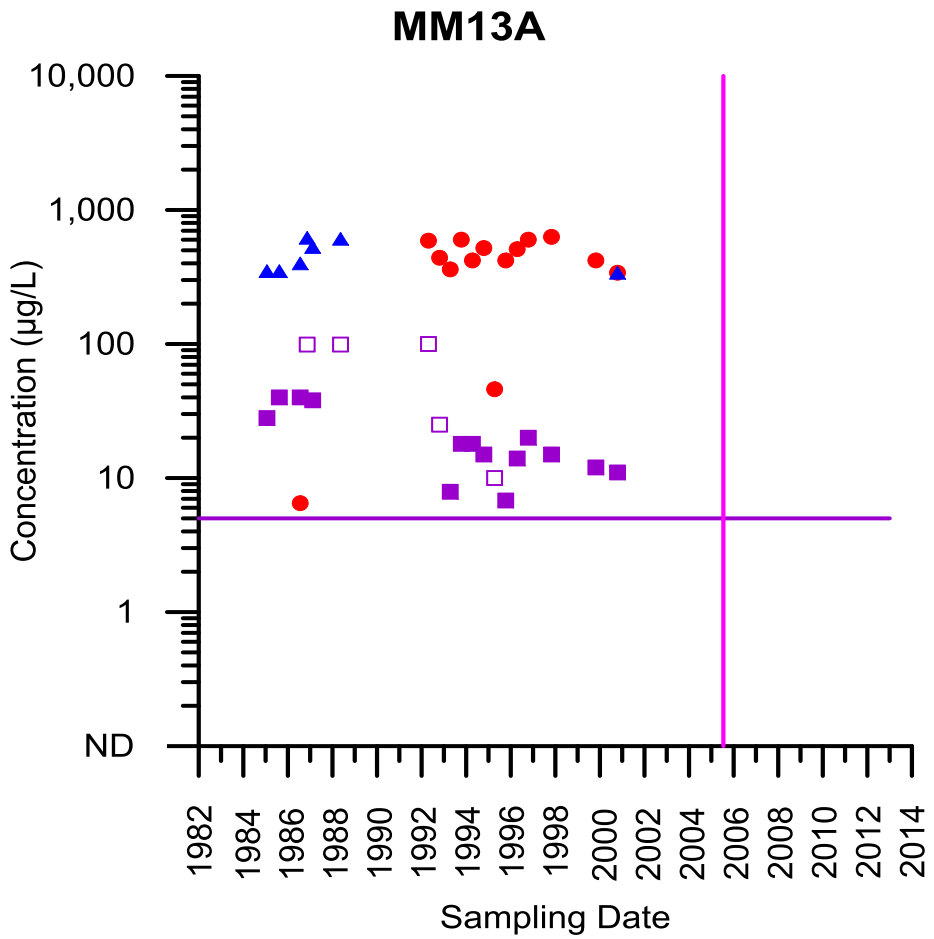
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM12A

JANUARY 2014

FIGURE C-25



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

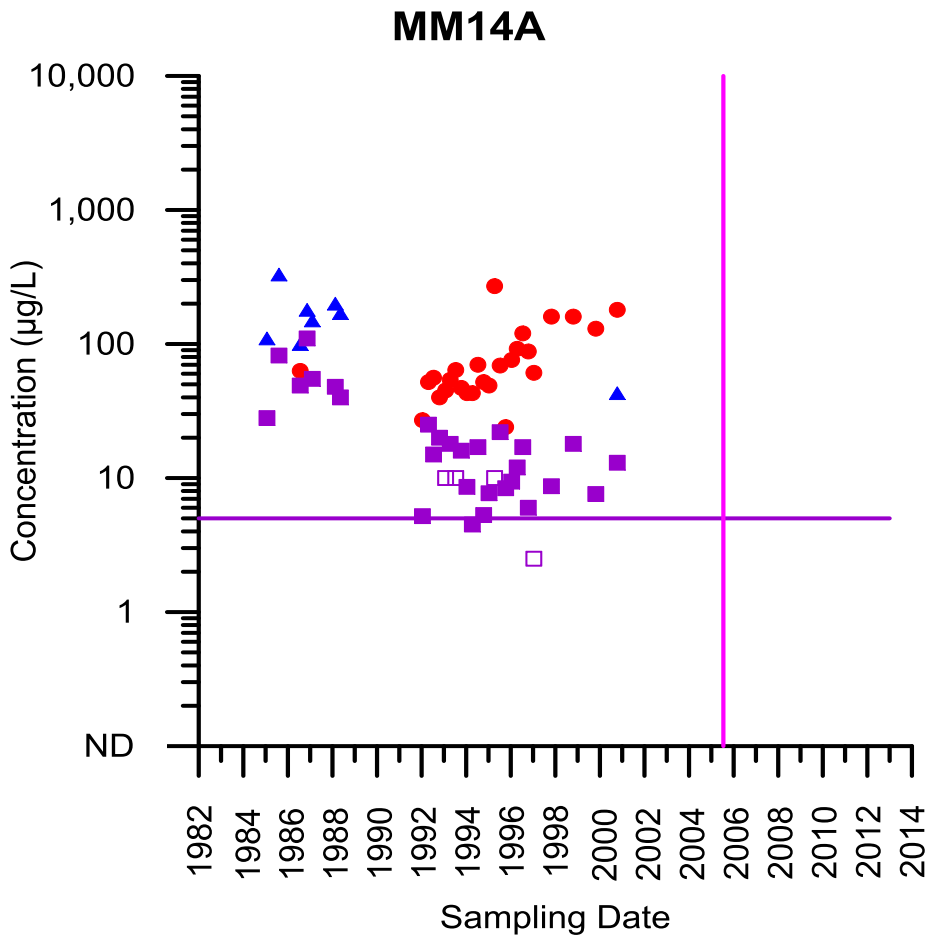
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM13A

JANUARY 2014

FIGURE C-26



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

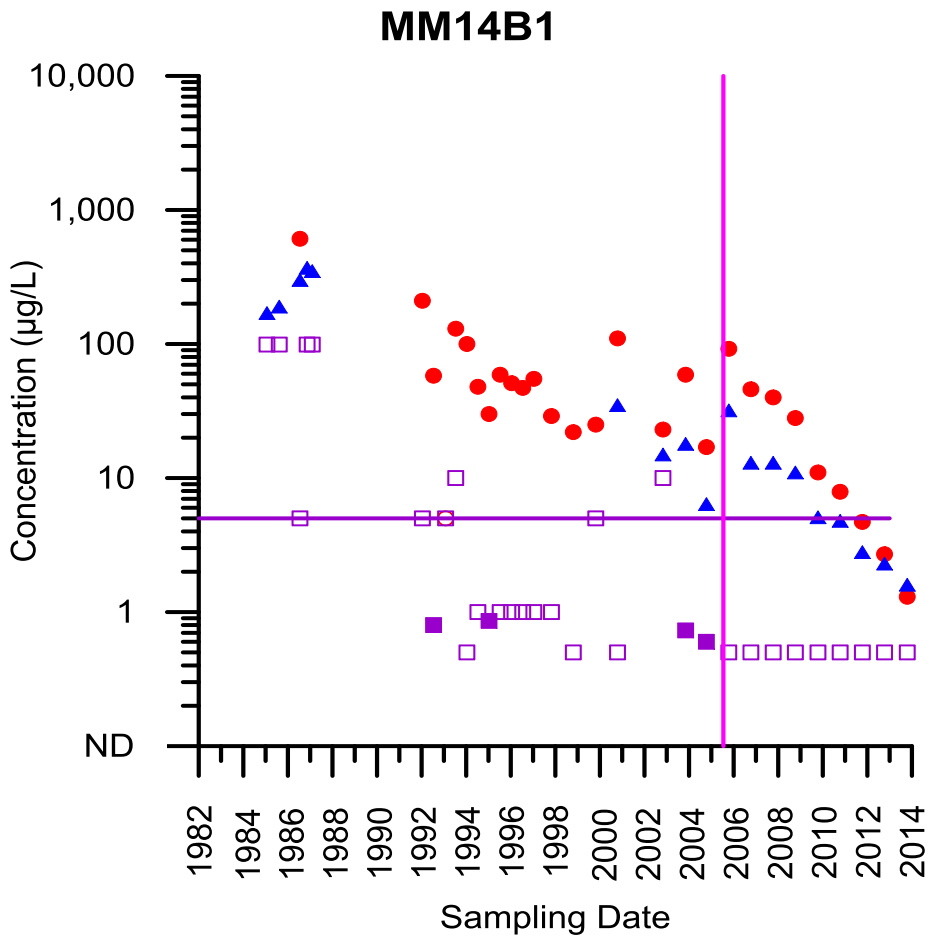
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM14A

JANUARY 2014

FIGURE C-27



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

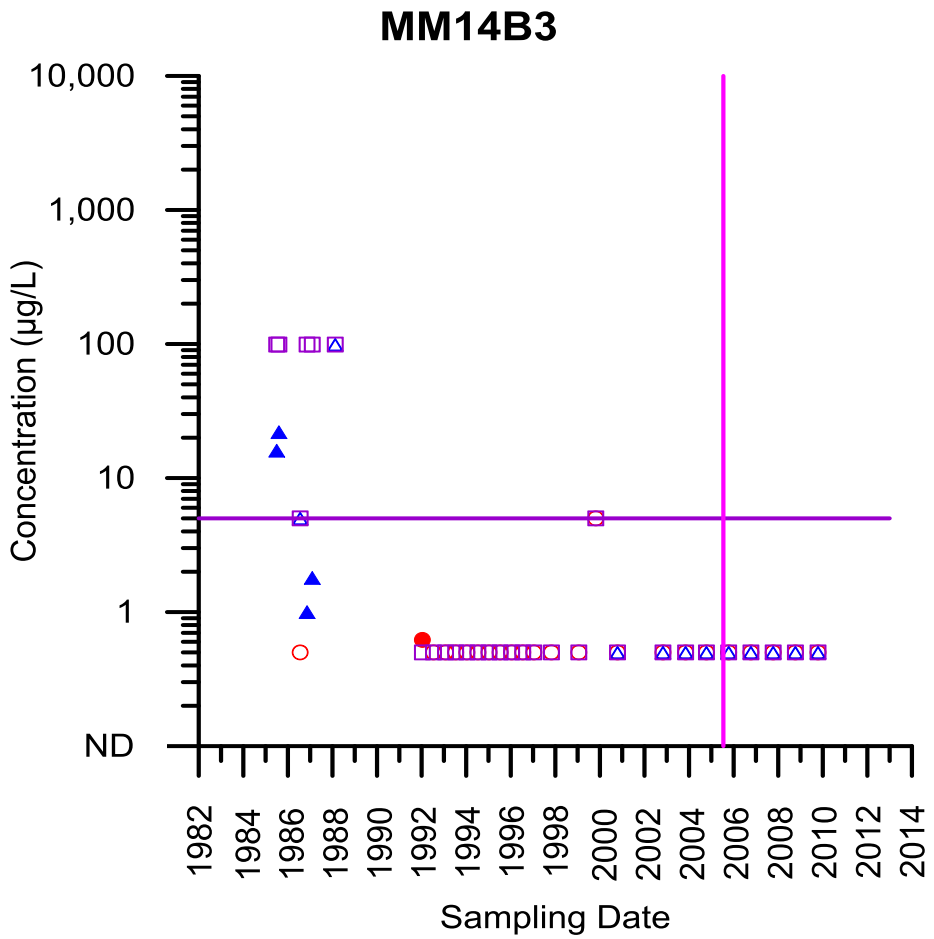
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM14B1

JANUARY 2014

FIGURE C-28



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

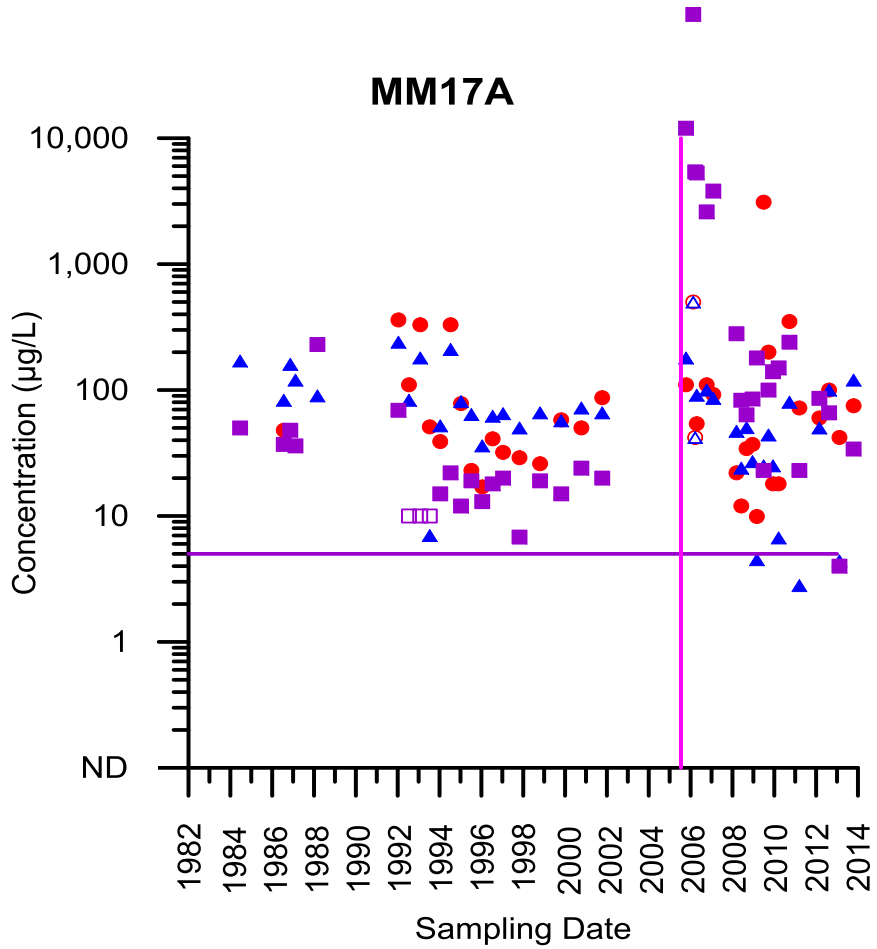
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM14B3

JANUARY 2014

FIGURE C-29



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

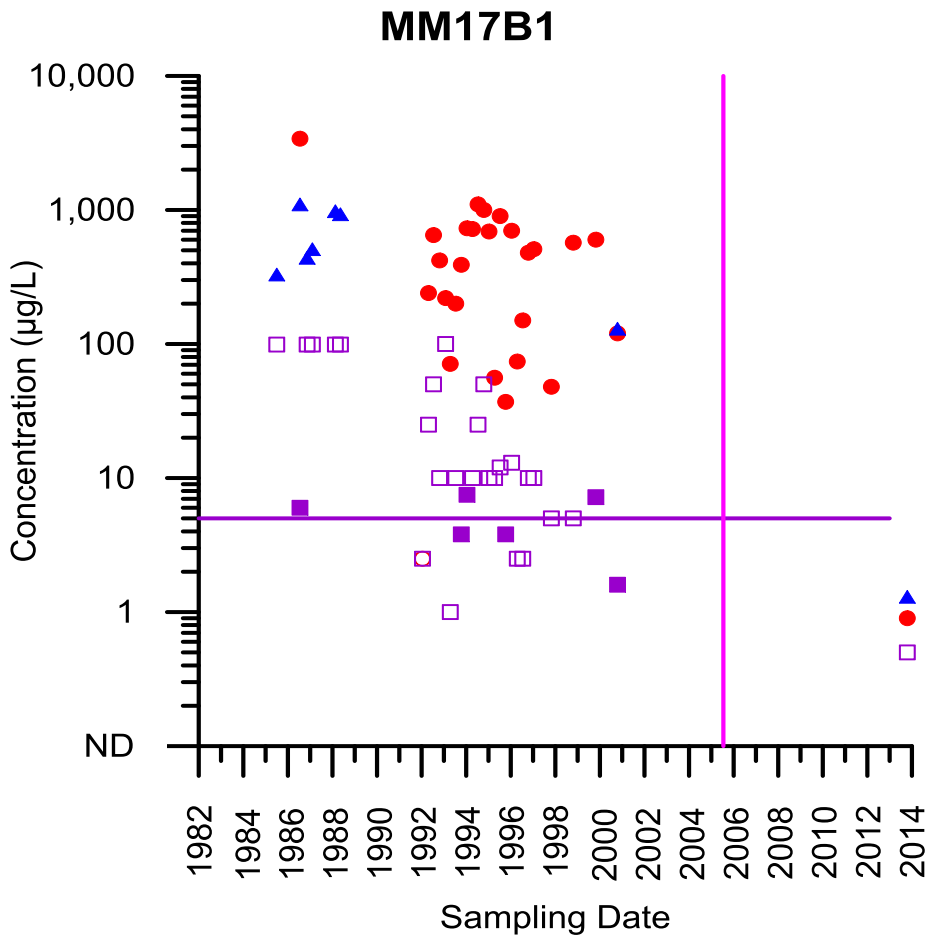
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM17A

JANUARY 2014

FIGURE C-30



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

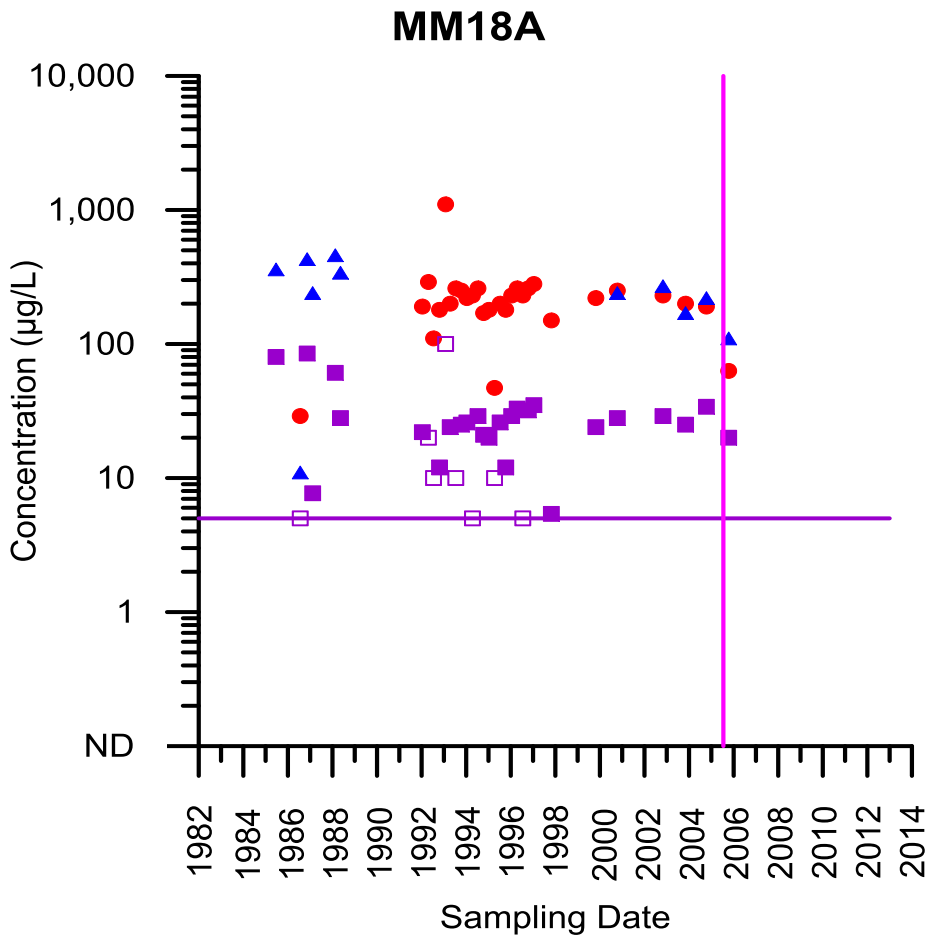
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM17B1

JANUARY 2014

FIGURE C-31



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

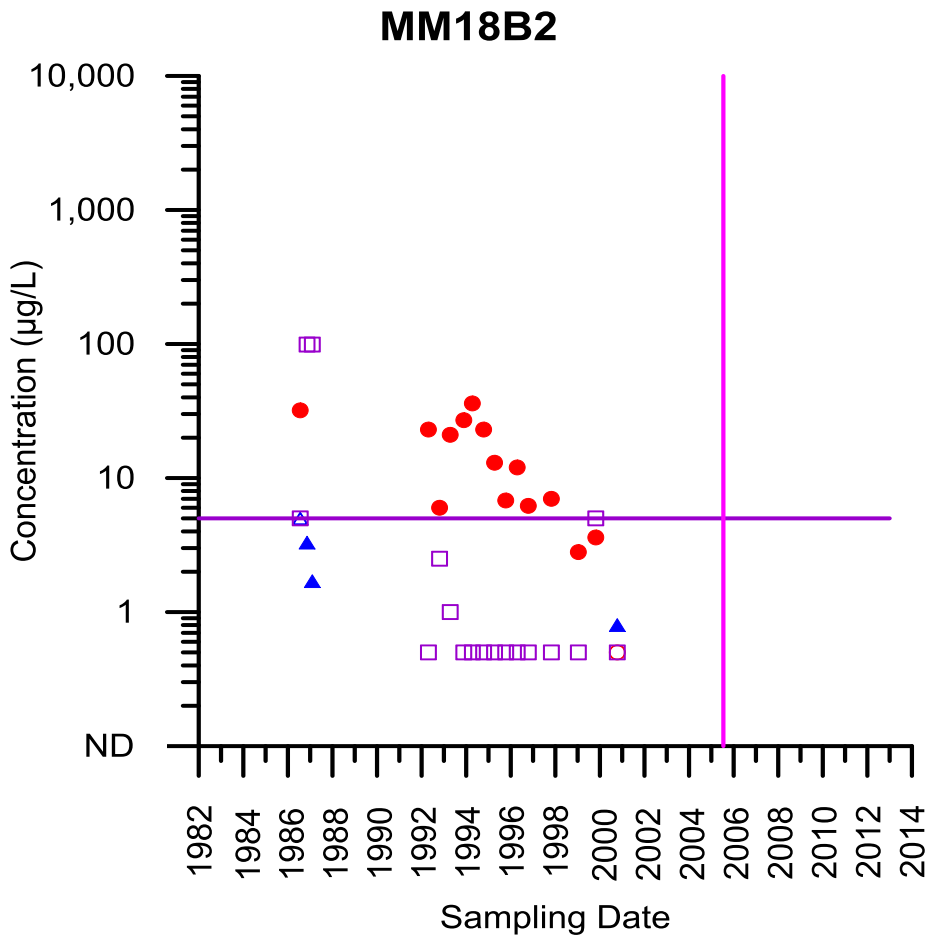
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM18A

JANUARY 2014

FIGURE C-32



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

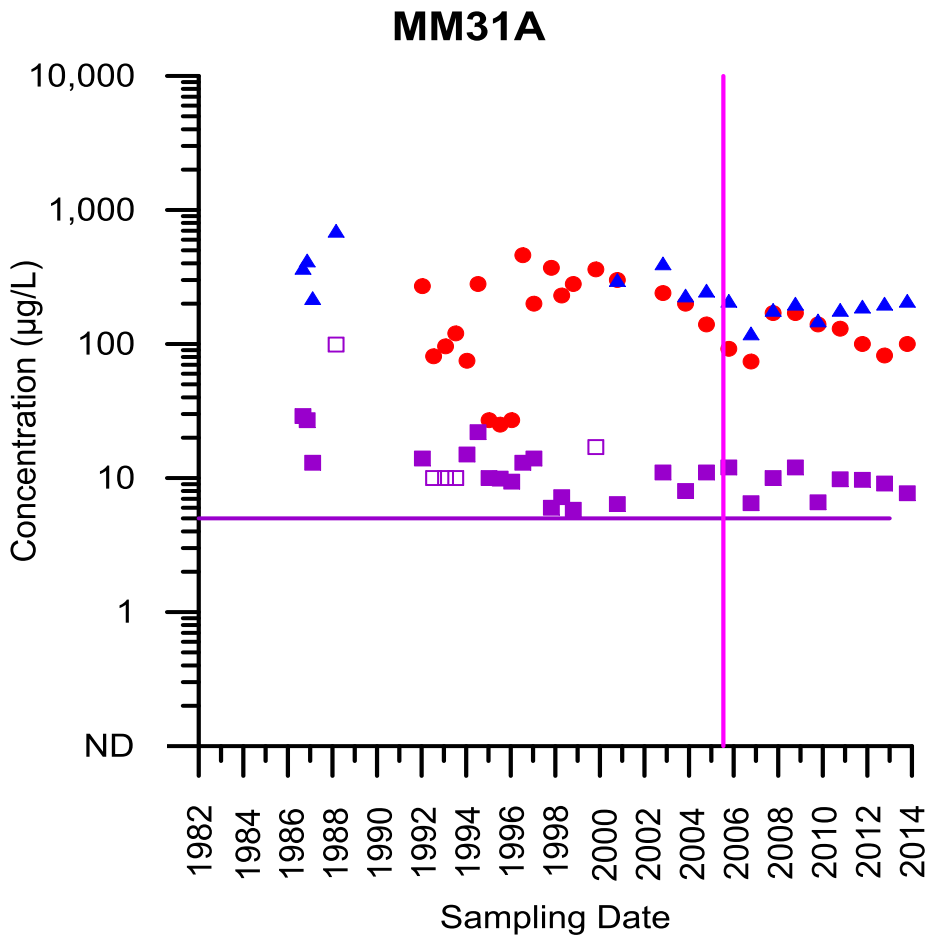
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM18B2

JANUARY 2014

FIGURE C-33



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

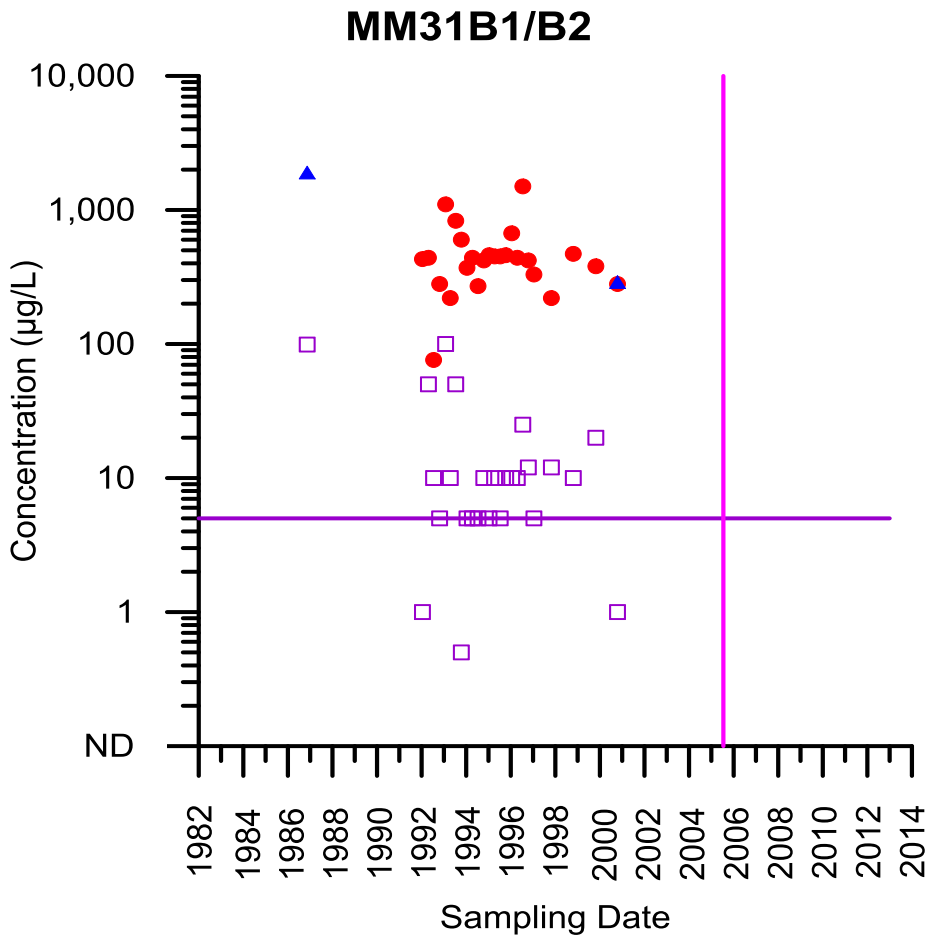
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM31A

JANUARY 2014

FIGURE C-34



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

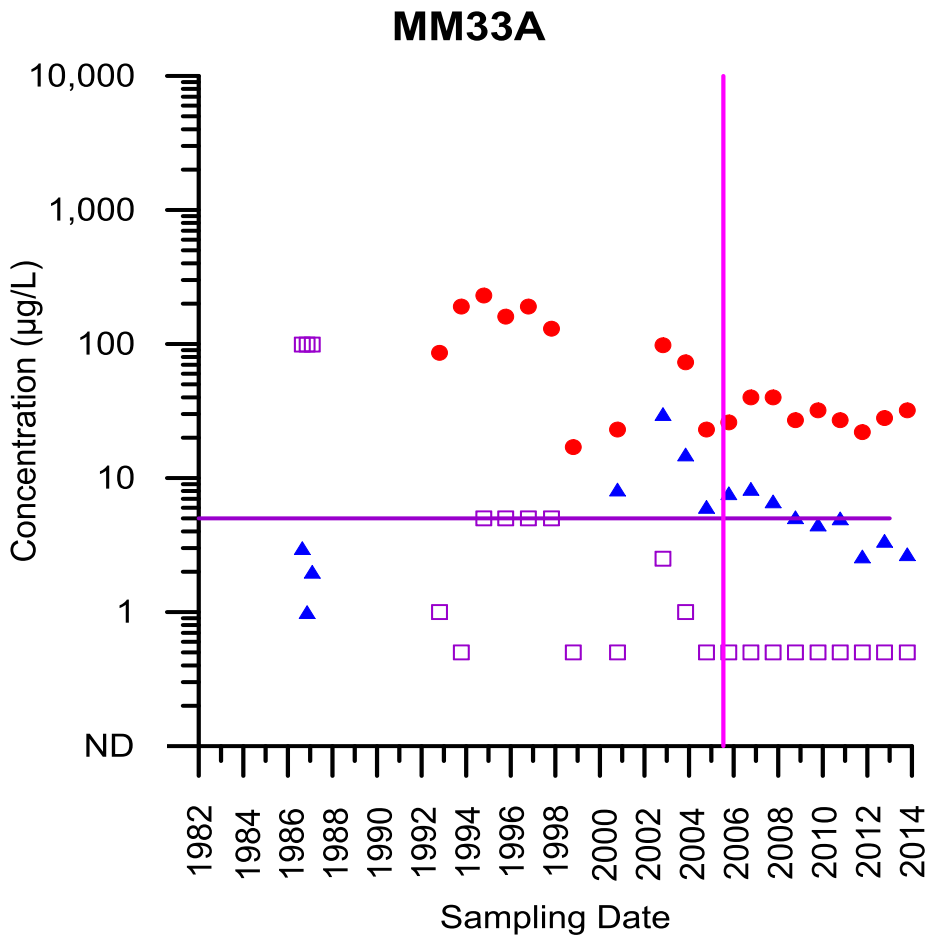
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM31B1/B2

JANUARY 2014

FIGURE C-35



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

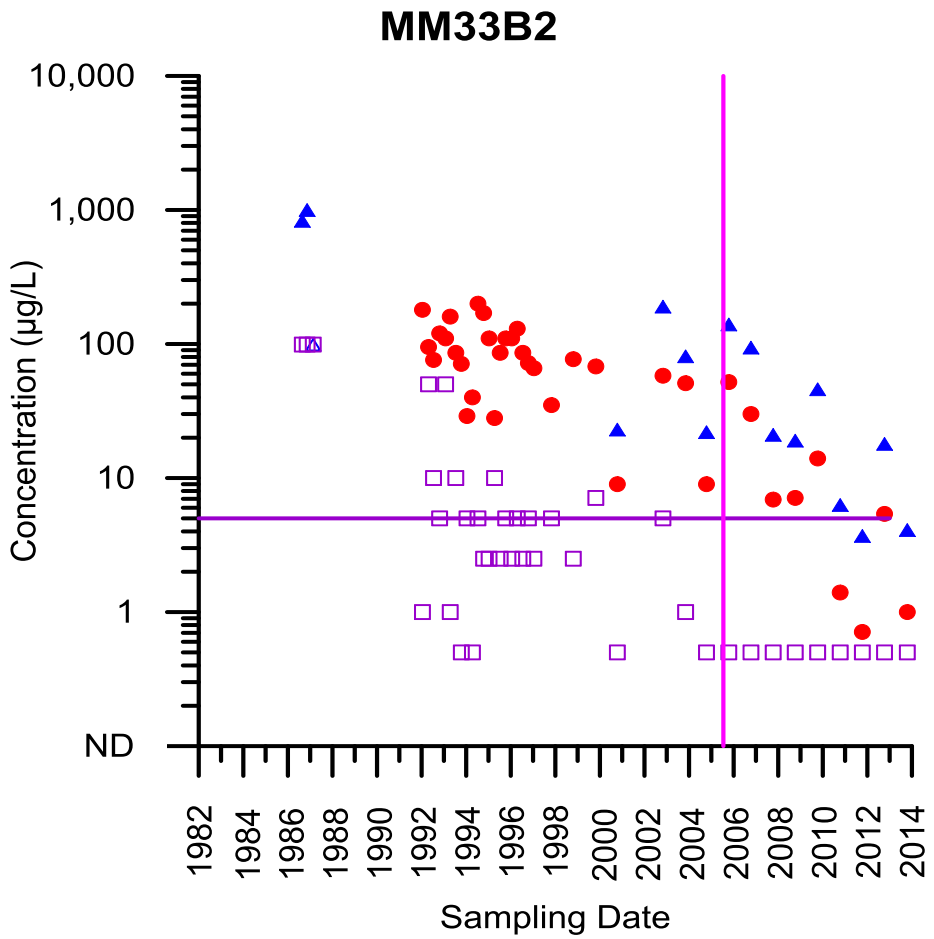
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM33A

JANUARY 2014

FIGURE C-36



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

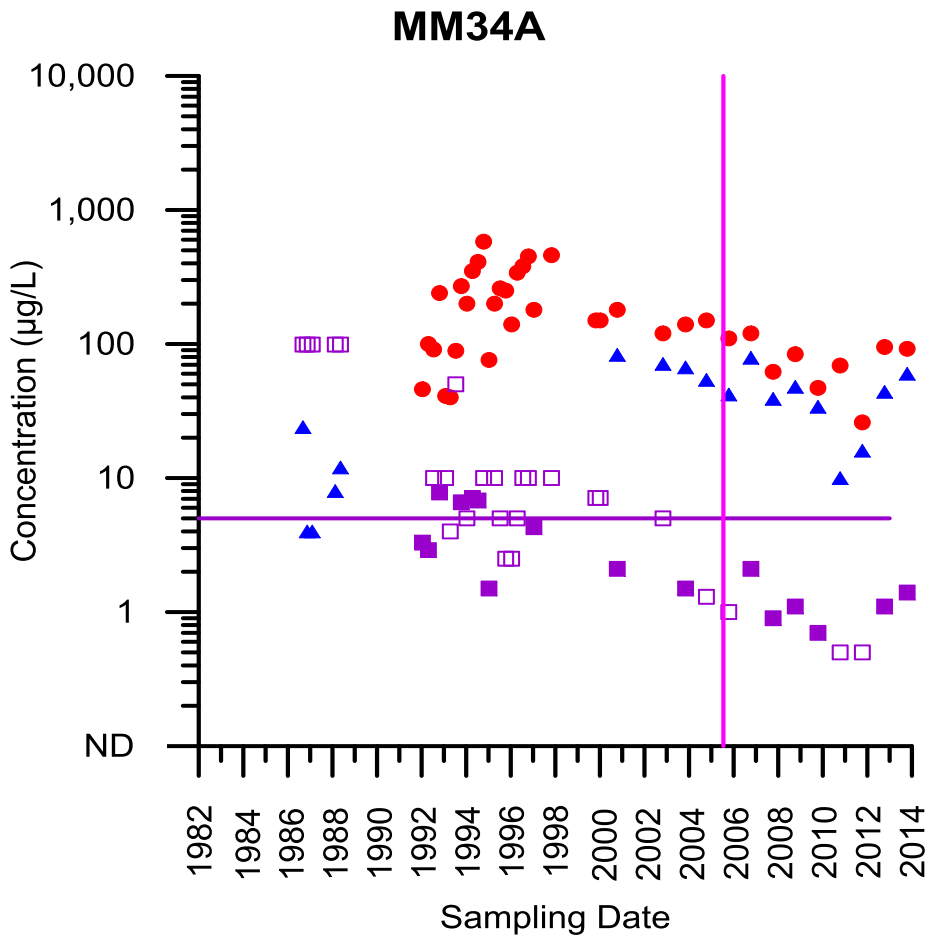
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM33B2

JANUARY 2014

FIGURE C-37



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

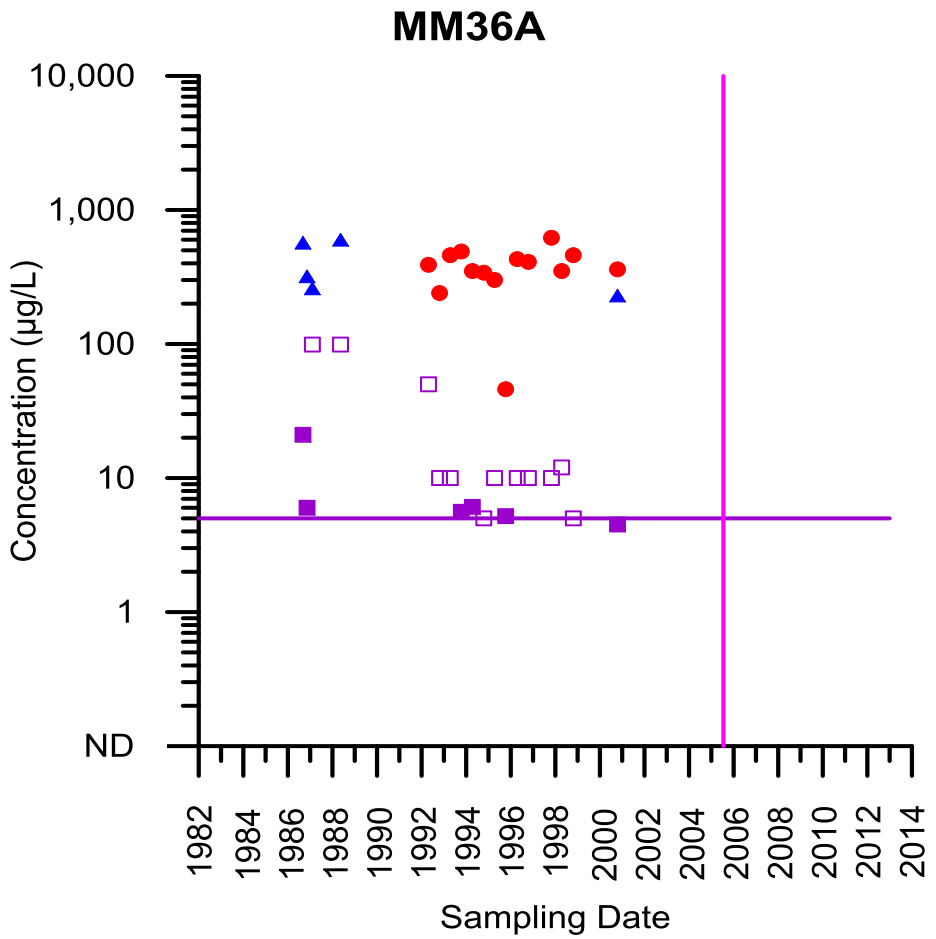
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM34A

JANUARY 2014

FIGURE C-38



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

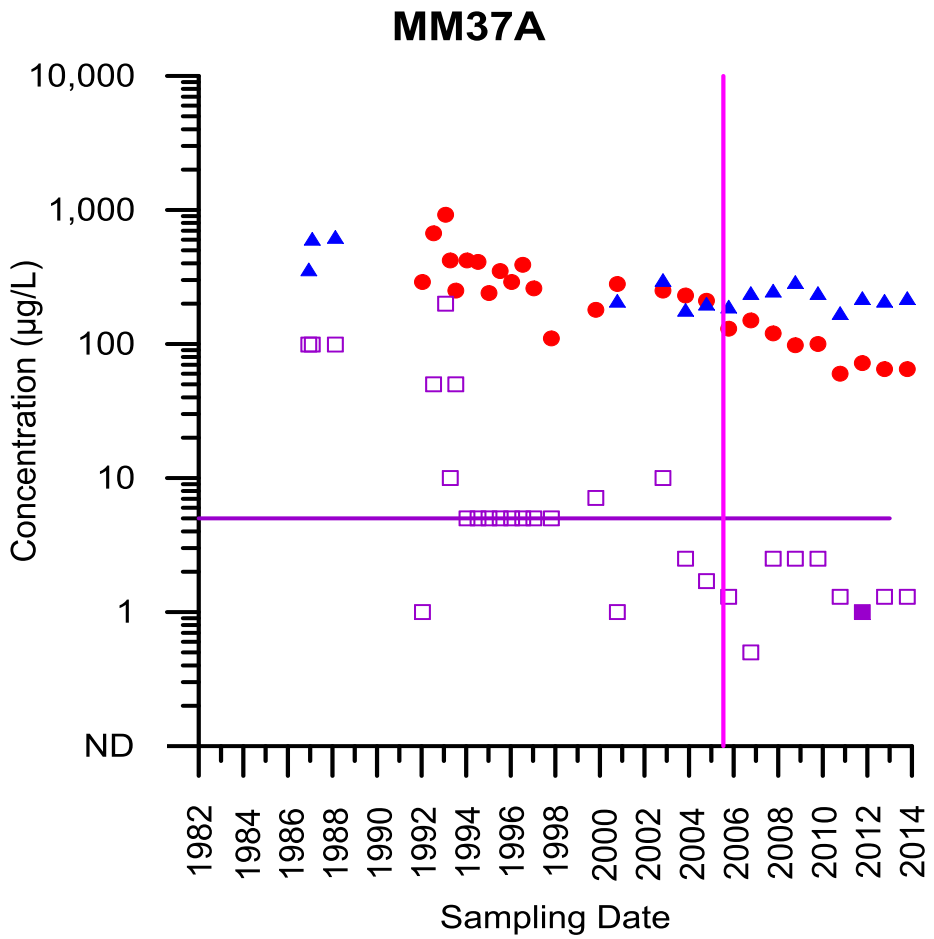
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM36A

JANUARY 2014

FIGURE C-39



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

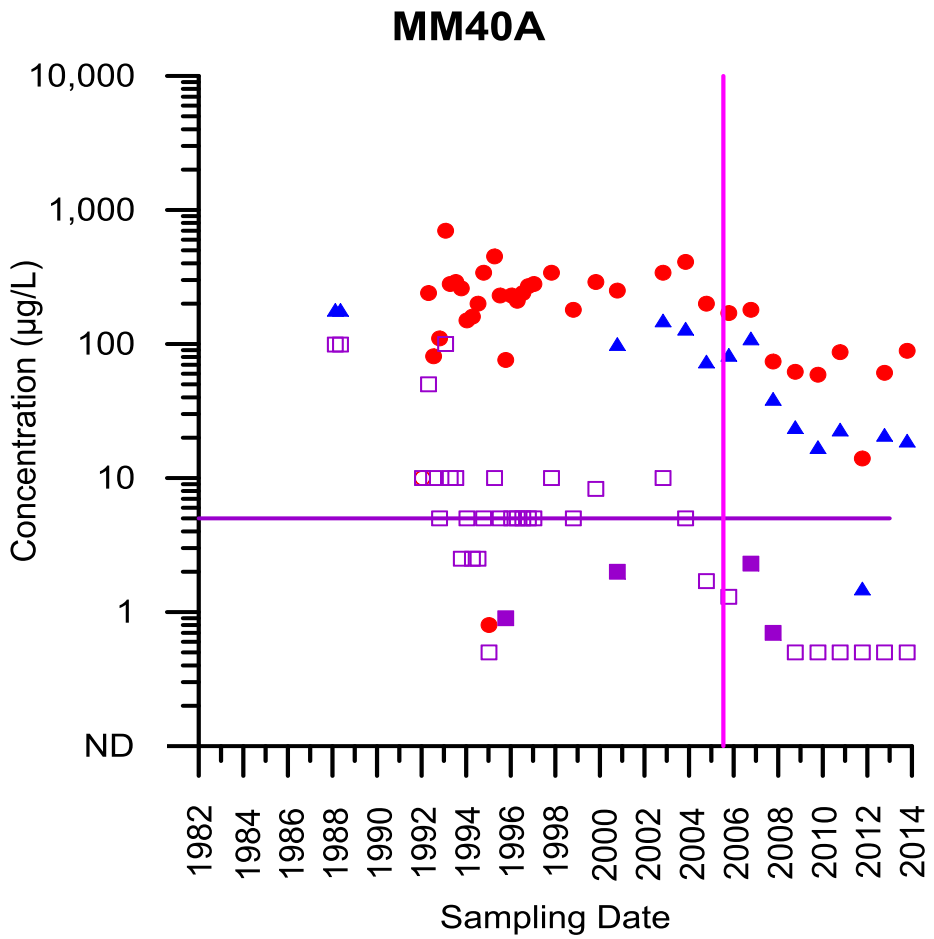
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM37A

JANUARY 2014

FIGURE C-40



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

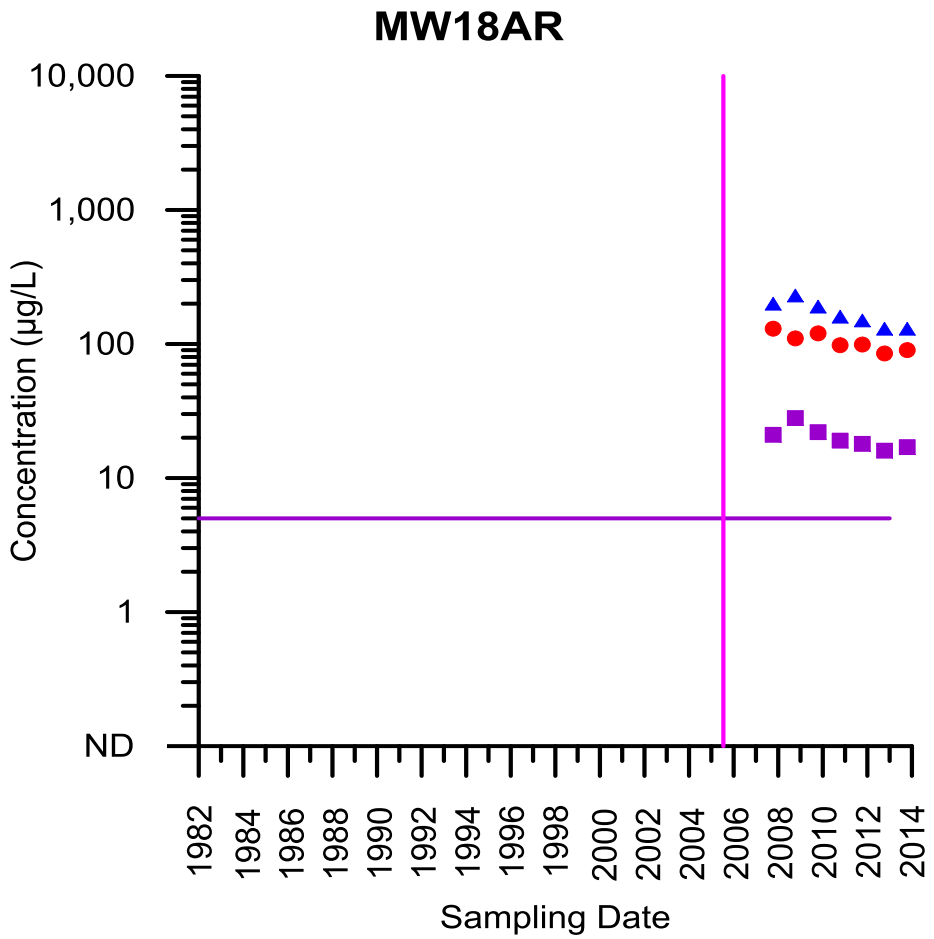
HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MM40A

JANUARY 2014

FIGURE C-41



EXPLANATION

PCE
TCE
cDCE
Cleanup Goal for PCE
July 2005 TWC PCE Spill

Note: open symbols indicate the analyte was not detected; the associated value shown is the laboratory reporting limit

HALEY & ALDRICH

1165/1175 EAST ARQUES AVENUE
SUNNYVALE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELL MW18AR

JANUARY 2014

FIGURE C-42